THE AMERICAN ARCHITECT

VOL. CXIX WEDNESDAY, MARCH 16, 1921 NUMBER 2360

An Echo from "Westward-Ho"

An Interesting Comment by a Subscriber on the Article "Westward-Ho" in the Issue of February 9

IT is at once inspiring from a sense of opportunity and disconcerting from a sense of incapacity that those vitally concerned with the teaching of architecture in the mid-western universities may well read the admirable contribution called "Westward-Ho" in a recent number of THE AMERICAN ARCHITECT. The inspiration comes from the recognition and appreciation, so well expressed, of the responsibility which the University School of Architecture has to shoulder if architecture is to become, as it ought, the symbolization of the American civilization of the next fifty years, that civilization being, as quoted, the civilization created by the Middle West. The disconcertation is in the realization that in the strict sorting of the "quick" from the "dead" in the architectural products that the college trained designer has yet produced, the "dead" quite overbalance the part that can claim any of the merits of the "quick."

Is it that the Middle Western School, relying upon the second-hand inspiration of lantern slides, photographs and prints—impossible as it has been for but a few students to become actually familiar with great works of architecture—fails to generate within the minds of its graduates that virility that makes for the "quick," the living in architecture? Are the level prairies, the grey landscapes, the predominance of Main streets and the consequent contagion of the provincial small town virus productive of too dark and oppressive a cloud to permit the academic light to penetrate? Are all the stupid revivals, all the employment of ill-conceived architectural forms—classic orders that do not function, senseless decoration that does not adorn—all the adaptation of materials to forms foreign to their very nature in order that some historic style may be claimed—are all these illegitimate offsprings of a so-called architectural education to be laid on the doorsteps of the Schools of Architecture?

Such questions may well be asked by anyone who, seriously concerned, surveys the trend of architectural creation during the past generation. Truly, the treatment of "imposing structures" by rendering "correctly proportioned basement, colonnade and entablature duplicate of those erected by the ancients for an entirely different purpose and relationship to the building itself"—this was the easy and obvious thing to do in a new nation that is a composite transportation of older eras of culture. That such structures now strike us as "dead" is a sign of growth in the appreciation of the true spirit of architecture. Yet, without having gone through the periods of ardor for the Classic, of worship of the Gothic, of admiration for the Renaissance, it is not probable that there could ever develop what eventually may be the "quick" American architecture.

Corinthian water-gates and peristyles, French domes and Spanish turrets, casting reflections of sepulchral whiteness upon the cold blue of Lake Michigan may indeed have mirrored upon an ill-burnished shield the glory of foreign and departed peoples. But were they less true to type of heritage than the people who walked beneath their shadows? The descendants of brawny Anglo-Saxon and Teuton, ancestors who had once been strongly influenced and tempered if not subjected by Roman conquest; blonde Swedes and fiery Celts, mingling with brunettes of Italian and Greek origin; Slav and Turk, Pole and Franc, African and Asiatic—all mingled together in the great American melting pot—could they produce within a few generations other than a composite array of architecture, most any part of which might seem dead and without eulogy were one to consider it separate from the whole conglomerate?

That such an accomplishment as Sullivan's Transportation Building at the World's Fair of 1900 was conceived so that it stood out from the mass of "dead" foreign architecture as a "living, vibrant, pulsating thing," is a bright gleam of hope for the future, but could it ever have been produced without

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the heritage from the past? May not such a rare accomplishment by a great artist be the ultimate expectation of years of architectural growth, just as the ripened golden fruit bursts forth from the husks of lower though no less essential stages of growth? American architecture will be living—is now living—even though it may appear to even more than the casual observer to be but an essemblage of barren husks carried over from seasons long past.

So in the university class and drafting rooms where the embryo architect is being nourished and trained, Classicism and other fertilizing elements that are our inheritance from the past, cannot be discarded, even though the material may in itself appear dead and lacking in any potentiality whatsoever. As well try to teach the production of a high grade of English literature with never a study of Shakespeare or Milton or Ruskin as to ignore the works of Vignola, Palladio and Espouy in seeking to arrive at maturity in architectural design. Only by acquiring a wide vocabulary of words as of forms, composing each respectively into beautiful thoughts and beautiful edifices will a great literature or a great architecture result. To teach this in architecture, an appreciation of the artistic wealth of the past, a knowledge of what to apply, what to discard, what to incorporate into that which will serve not only to symbolize the present civilization, but which will serve toward elevating the people to higher planes—this is the task of the University, that in so doing, architecture may be ever a living art worthily emblematic of the spirit of "Westward-Ho." R. F.

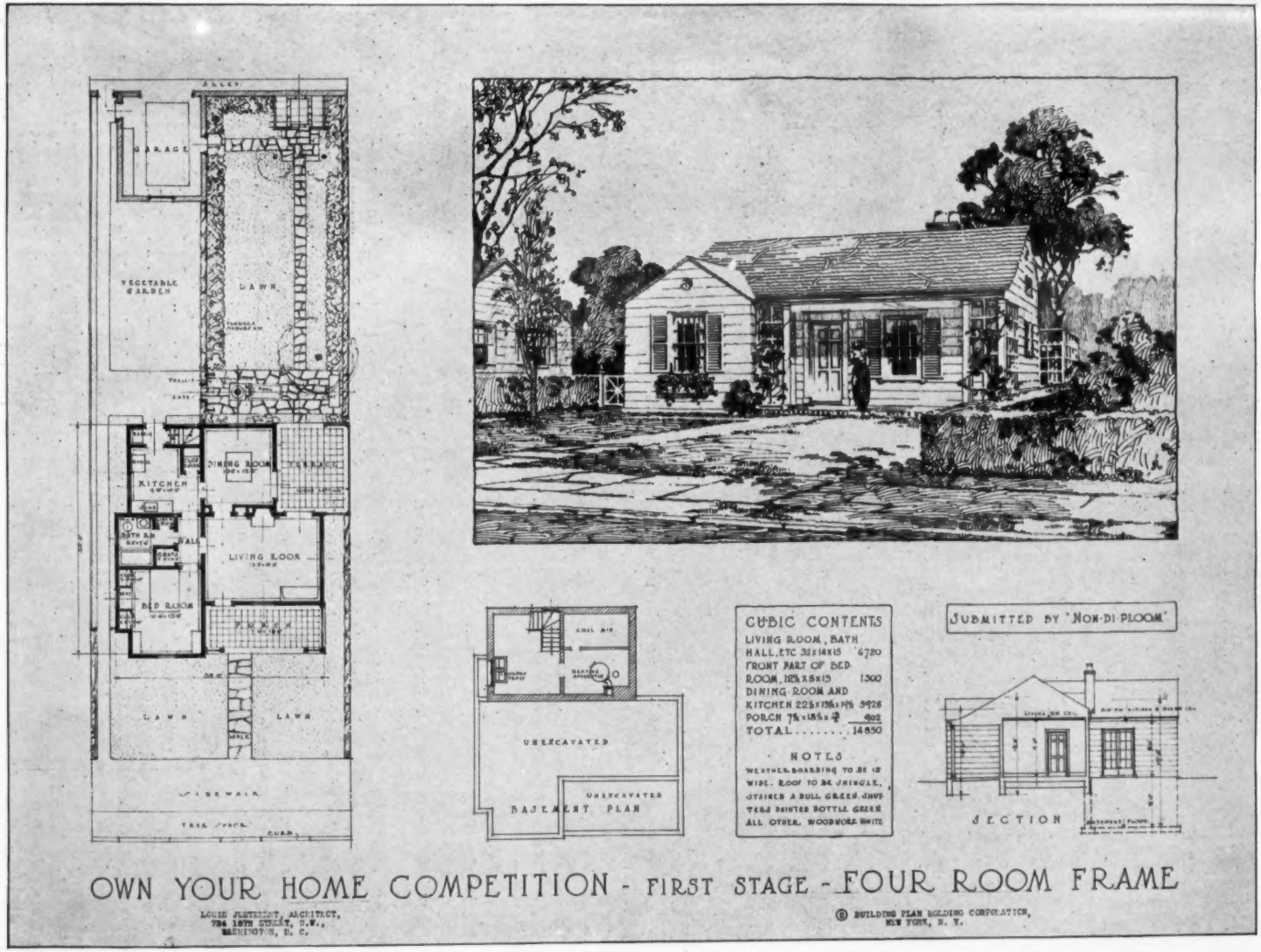
Building Gilds and Housing in England

(*By our Special Correspondent*)

THE present position with regard to housing in England was already of sufficient complexity; during the last two months circumstances have arisen which seem likely in this respect to make "confusion worse confounded." Putting entirely aside for the moment the adverse vote of the House of Lords on Dr. Addison's complicated "omnibus" scheme I refer here directly to the recent resignation of Mr. Stephen Easten of Newcastle from the position of Director of Production in Housing—a resignation which has brought the whole question of the so-called Gild contract system directly before the public.

Mr. Easten, as has been well remarked, like Mr. Smethurst, represents the democratic and progressive side of the building trade. Both these gentlemen are in sympathy with the legitimate demands of labor and trade unionism—both are men who do not spare themselves in doing public work, in spite of the many and important claims on their time, and both are willing helpers to those in authority, but are driven into opposition by the methods of our Government and its departments. "As far as I am concerned," said Mr. Easten, "the last straw was the Ministry's adoption of the ill-advised, blundering and wasteful scheme of gild subsidies. I agree with the gild system *per se* for, after all, it merely means the cooperation of a number of workers in building houses, and who are able to obtain contracts in competition with the private builder. I cannot, however, accept the idea of these gilds being subsidized to such an extent that they are able to drive ordinary building contractors out of the field. For instance, the employer's contract exacts a penalty if he exceeds his estimate, but allows a small added profit if he works below it. The Gild contract guarantees the workers 5 per cent. profit even if its estimated cost be doubled in working, there being no penalty whatever. If the Gild saves £100 on a house it actually loses money. If the Gild estimates £1,000 and builds for that sum it makes £50, while if it saves, say, £200, it only receives £40 profit—and if the house costs £1,500 the Gild gets £75. That surely does not make for economy."

Another point which Mr. Easten drives home is that while the employer is not allowed to offer an inducement to workers other than the usual standard wage of the district, and must not pay for sickness or time lost through bad weather, the Gild contract permits for sickness payment and lost time, etc., which means that the workers naturally flock to the gilds whenever they can. "Summing up," says Mr. Easten, "it is clear that employers who have pledged themselves to do everything possible to help production of houses are penalized, while the building Trade Unions, which flatly declined to help in any way, are officially subsidized. The result must be that employers will be compelled to give their men all that the Gilds now offer, which obviously means a heavy increase in building costs. Be sure," he adds, "that employers will fight for the right to live, whatever the Ministry of Health may do. To make mat-



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FIRST PRIZE

FRAME HOUSE

LOUIS JUSTEMENT

"OWN YOUR HOME"—SMALL HOUSE COMPETITION

ters worse, all this muddling and waste has been in the face of repeated cautions from the Ministry's own experts, whose advice to Dr. Allison has fallen on deaf ears."

This is a serious charge, and one which the Ministry of Health could not afford to overlook. In defending their housing efforts they describe the Gild Contract as an alternative method, of which "representatives of labor have claimed that good results from the point of view of output and economy would be secured by labor undertaking to build on a co-operative basis. The Ministry of Health decided to put this claim to the test, but in view of the novelty of the proposal and the absence of experience it was thought necessary to limit the experiment for the time being, and therefore only a limited number of schemes in various parts of the country have been approved. The number of houses in gild proposals is approximately 1,500, as compared with the total of 167,168 for which tenders have been approved. The schemes have not been long in operation, but already the experience shows that the output compares favorably with that on other schemes, and that the costs promise to be lower than on many other schemes.

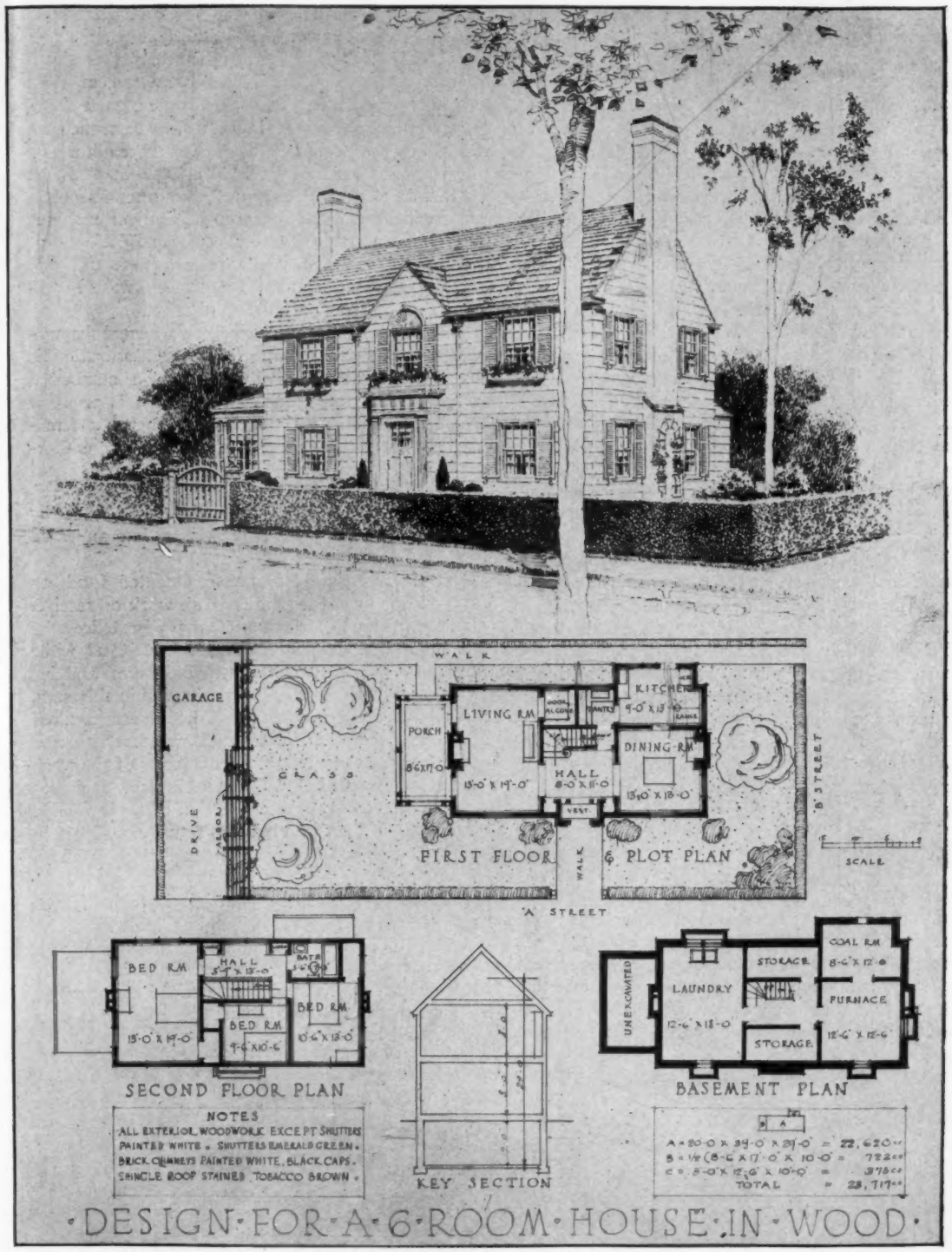
TO sum up: the Ministry states—"the Gild system is an experiment being tried on a strictly limited scale as a means of securing the increased output and reasonable costs which have not been secured through building contracts. It is being carefully watched and results tabulated."

Here, then, are two statements which are absolutely at variance; and it may be interesting to see what outside opinion is on this point.

"It is singular," says The Architect, "that Mr. Easten, who has had considerable experience in these matters, should be utterly and entirely wrong. . . . . Mr. Easten, himself a great contractor, who has everything to lose by the success of the gild movement, applies no hard words to it. All he claims is that the gilds—as yet untried and experimental—should not be given an unfair advantage over the contractor out of funds provided by the taxpayer. For only those who delight in word-spinning can really think that the so-called gilds—which are not gilds, except in name—are actuated by a desire to do public service, when it is absolutely clear that their motive is a wish to divide the wholly imaginary windfall which they believe falls to the ordinary contractor, in order that their members may secure better pay and conditions than fall to the workers employed by the contractor. . . . . When this fallacy is exploded—as it must be—by the test of trial, the gilds will be wound up, and the completion of their unfinished work handed over to the despised contractor. Meanwhile, we feel, with Mr. Easten, the absolute injustice of subsidizing the untried gilds at the expense of the contractor."

Even stronger is the criticism expressed by "The Daily Telegraph," in a two-column leader early in this year. "Apparently, the Ministry of Health, instigated by motives which have not been confessed, is determined to establish gilds without regard to public economy or the welfare of the building industry, in which tens of thousands of workers are concerned. The facts are simple, and, as far as we know, undisputed. On the one hand the private employer's contract contains a clause penalizing him if he exceeds his estimate, and assuring him a small additional profit if below it. That is a business-like arrangement. What are the terms conceded to the gilds? Mr. Easten's statement has not been controverted." (The writer then quotes the statement which will be found at the beginning of this notice, commencing with the words, "The Gild contract guarantees") . . . . "That is a form of contract which makes definitely for waste of the taxpayers' or rate payers' money. The employers' contract allows him 1½ per cent. for establishment charges, but the gild is conceded 6 per cent., and in addition is permitted to pay for lost time and sickness, and offer any other inducement to the workers. The result of this inequitable arrangement must be that the most expert workers will stampede from the ordinary contractor to the gilds, with their tempting baits, the bill for which is to be paid by this already heavily burdened country. . . . . Without a 'by your leave' either from the nation or from Parliament, Dr. Addison is instituting a system of whole-time payment, in association with other bribes, which as Mr. Easten suggests, 'may absolutely revolutionize the whole industry of the country.' Whether it rains or snows, and whether the men engaged in house-building be in good health or bad, full payment is to be made to them under this gild system, and the charge is to be met out of the pockets of the community generally. . . . . We hope we are wrong in suggesting that the country is confronted with a conspiracy to undermine the foundations upon which British industry has hitherto rested in order to experiment with a Socialistic scheme, but there are grounds for that suspicion."

"The Daily Telegraph" is undoubtedly one of the most influential journals in this country, and the lines above quoted amount to a direct challenge on this particular issue to the Government policy of muddle and waste—a policy which has since then received a direct rebuke in the recent Dover election, fought clean through on the platform of "anti-



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SECOND PRIZE — FRAME HOUSE — J. IVAN DISE AND E. J. MAIER

"OWN YOUR HOME"—SMALL HOUSE COMPETITION

waste." But I attach as much importance to the expression of opinion of "The Architect"—all the more as I have more than once had the opportunity of discussing this question with its editor, and must express here my obligation to his suggestions, with which I find myself in entire sympathy. There are two bodies of men among whom such a movement as the Builders' Gilds has evoked enthusiasm. The worker believes that his wages will be higher by eliminating the contractor, because he thinks there will then be a large additional fund to be divided between those employed on a given contract. The enthusiastic section of the public may believe that the workman, permeated with zeal to perform public service to the community, will work as he had never worked before, and that we may be on the edge of a golden era in building which will recall the great mediæval epoch. But those who look at this matter from the standpoint of past experience recall few instances in which the working classes were inspired by a burning desire to benefit the public, while they are also aware that many contracts are carried out without actual profit, and sometimes even at a loss to the contractor.

The fact is, I believe, incontestable that the smaller class of builders previous to 1910, when the Finance Act was passed, built houses for the working classes here mostly at cost price. They were enabled to do this because they sold undeveloped land at a profit, which was the only profit they often obtained, and one which, under the Increment Duty of the Finance Act, was taxed, thus putting an end to speculation, as the Government, while claiming a share in the profits of the contractor, when he made any, did not pay a portion of his losses when, as was frequently the case, he lost money on the transaction.

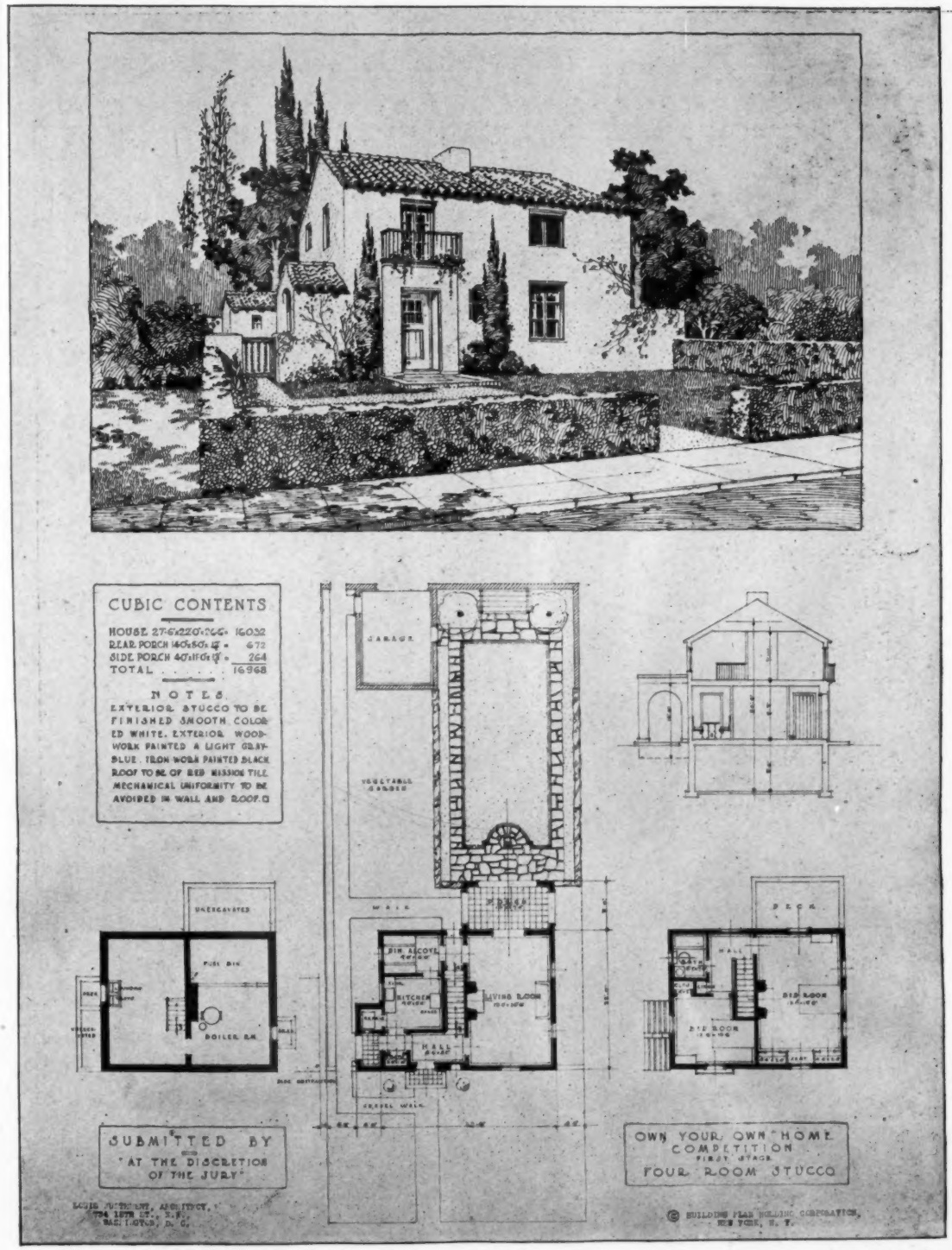
FROM first to last the smaller speculative builder housed the people at cost price, without recourse to State aid; if the workers were not sufficiently well-housed they at least got what they required without assistance from the State. The system was one which, imperfect in theory, was effective in practice, while it was capable of much improvement by the simple method of stiffening local enactments to secure good building, and while there was no reason why local authorities should not have controlled, and insisted upon, the proper development of estates. The better contractors employed on ordinary contracts sometimes made a good profit, but often none or a loss; in the former case, the public gained the benefit of his capital expenditure, in the latter his financial position usually enabled him to face his losses. The average contractor's profit, after deducting expenses, probably seldom exceeded 10%, and was more often 7%, or even 5%.

The contractor's business was always to organize so as to eliminate waste, and his success was dependent on the efficiency of his organization.

That the so-called gilds are likely to equal the success of the skillled contractor in administration is not likely. Supervision will be in a larger number of comparatively untrained hands, while it is probable that the control of the workers, under such a democratic system, will be neither as effective nor as thorough as in that of the contractor. If this should prove the case the 5%, 7% or 10% which the contractor makes when successful will partially or wholly disappear, if indeed this is not turned into an actual loss.

But since the gild has no accumulated funds to start with it must then either cease work or receive, like our railways, telephones, and post office, the amount of the deficit from the State. And while the contractor takes work at a fixed sum, and his profit is only obtained if he works within this sum, the gilds are to receive, as we have seen, a fixed rate of remuneration for all work, whatever it costs, while they are to be paid the actual costs of the work carried out by them. What are, in fact, their so-called estimates save the expression of a pious hope on the part of men who have no actual experience in administration or finance, and no capital on which to work?

For the reasons above stated it is to be feared that this whole system of building gilds, with its proposal to distribute profits among those employed, may, in actual working, only turn out another of the burst bubbles which have characterized the attempts of Government to revolutionize the conditions of a complicated industry.



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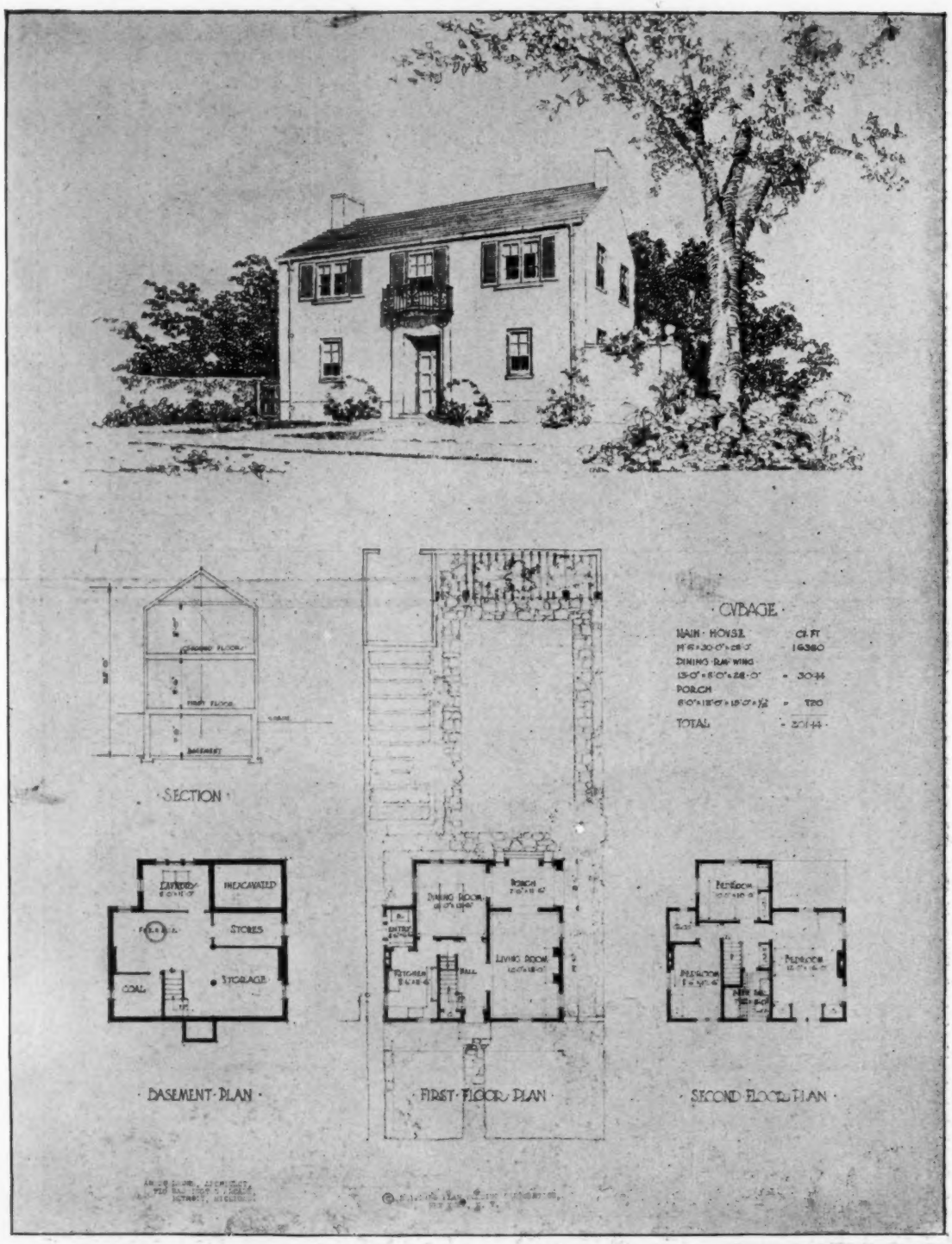
FIRST PRIZE **STUCCO HOUSE** **LOUIS JUSTEMENT**

"OWN YOUR HOME"—SMALL HOUSE COMPETITION



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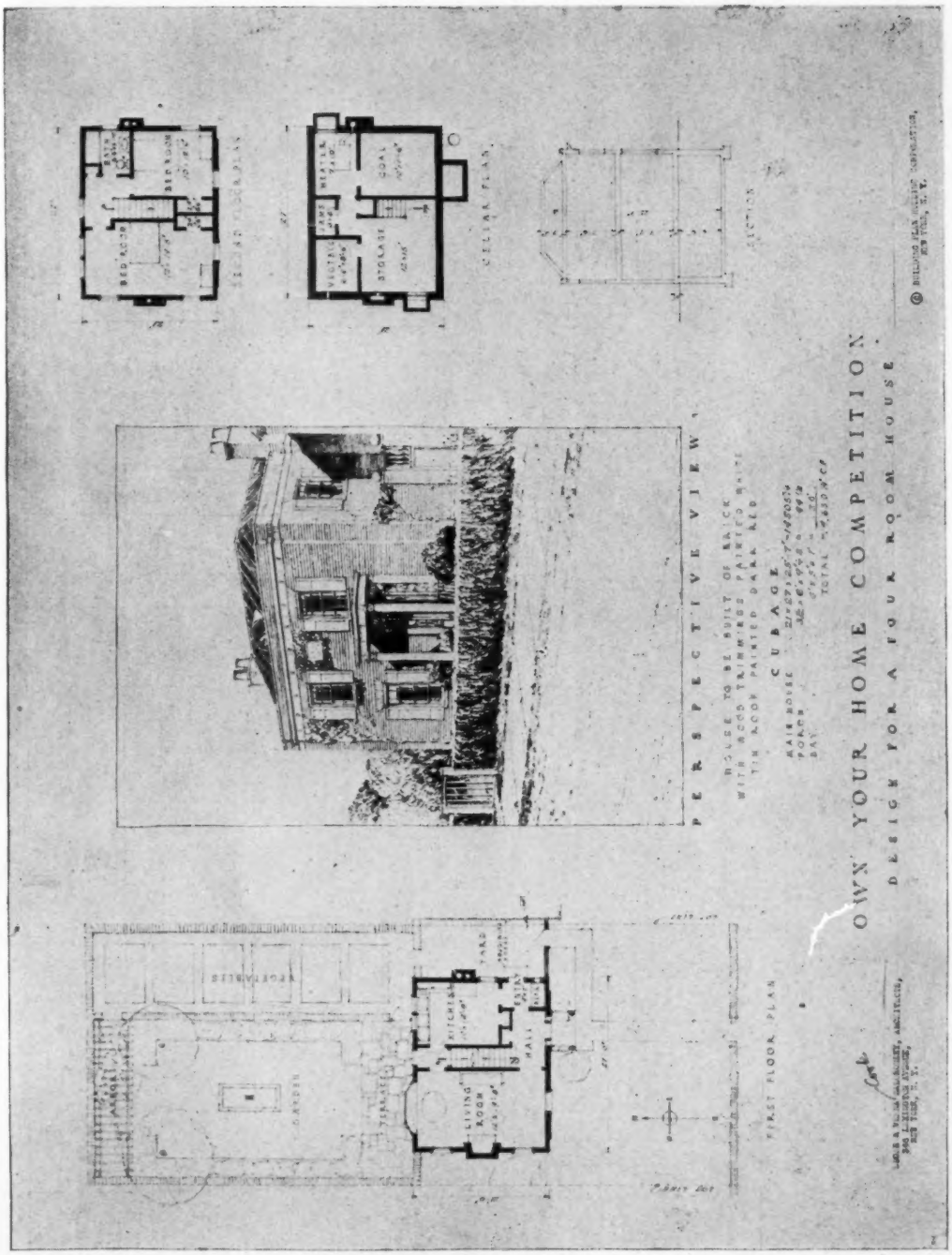
SECOND PRIZE — STUCCO HOUSE — AMEDO LEONE.

"OWN YOUR HOME"—SMALL HOUSE COMPETITION



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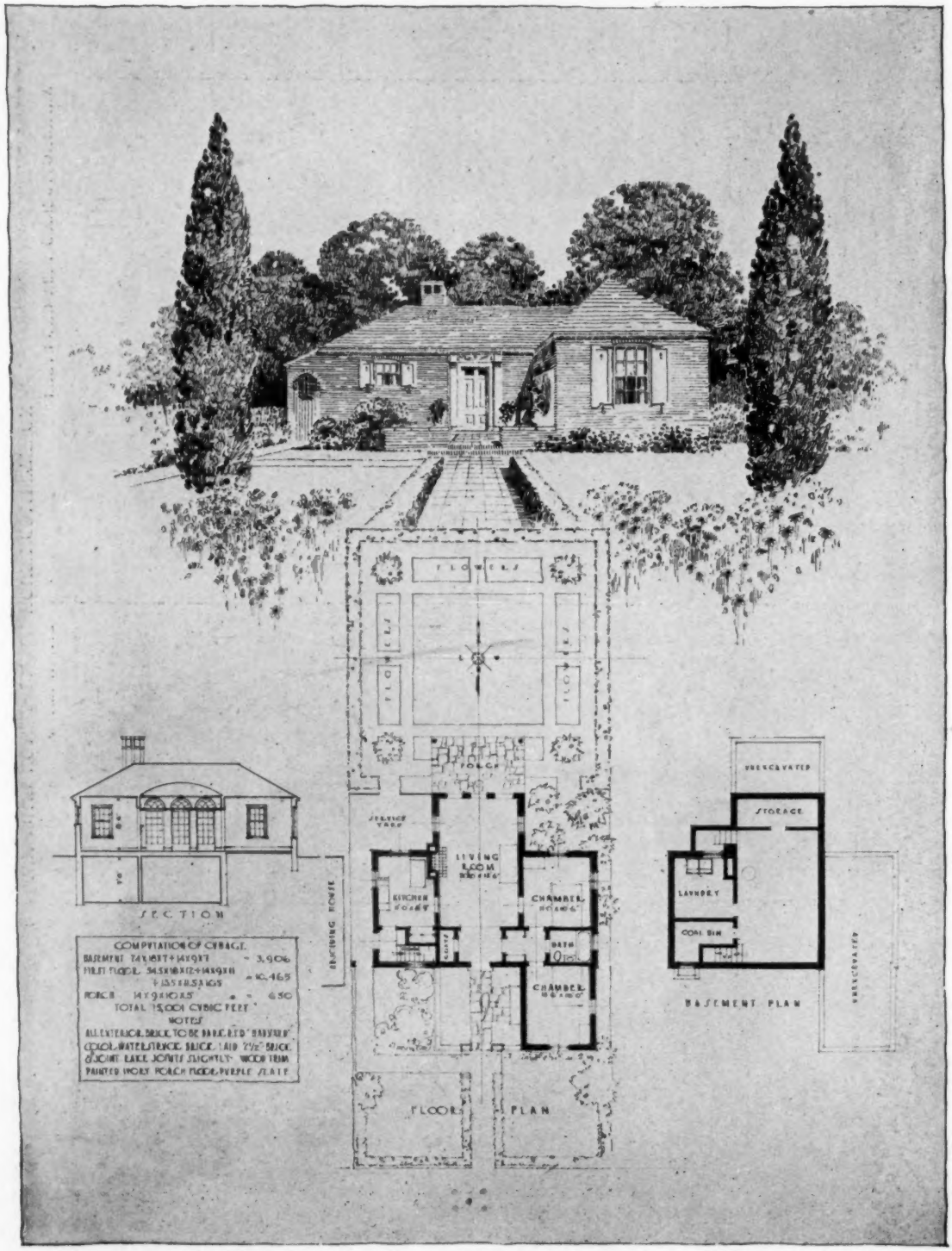
FIRST PRIZE

BRICK HOUSE

EDGAR AND VERA COOK SALOMONSKY

"OWN YOUR HOME"—SMALL HOUSE COMPETITION



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SECOND PRIZE — BRICK HOUSE — JOHN BARNARD

"OWN YOUR HOME"—SMALL HOUSE COMPETITION

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

ARCHITECTURE, RAYMOND M. HOOD
SCULPTURE, JOHN GREGORY
INTERIOR DECORATION, ERNEST F. TYLER
MURAL PAINTING, ERNEST C. PEIXOTTO

Official Notification of Awards—Judgment of December 14, 1920.

PROGRAM

CLASS "B"—I ANALYTIQUE.

The Committee on Architecture proposes as subject of this Competition:

"THE SIDE ENTRANCE TO A CHURCH."

A Catholic church, situated on a plot bounded by four public streets, has been left with its side elevations unfinished, due to the lack of necessary funds at the time of the original construction. The architecture of the church as it stands is Renaissance, and it is now proposed to finish the exterior of the right transept wall and the transept entrance. The latter is the subject of this program.

The problem requires the study of an architectural composition, complete in itself, of solemn dignity, and properly accentuating the secondary entrance against the transept wall. The door opening shall be 8 feet in width, which is the sole limitation of the problem. Such a door is usually treated with the ordinary classic elements—that is to say, columns, pilasters, pediments, niches, statuary, etc. In this problem the development of the motive is left entirely to the discretion of the student, save that account should be taken of the architectural treatment of the transept as a whole. Examples of such entrances occur in nearly all of the Renaissance churches in Italy and France.

JURY OF AWARD:

P. A. Cusachs, L. Warren, G. A. Licht, W. K. Rainsford, A. E. Flanagan and T. S. Holden.

NUMBER OF DRAWINGS: 167

AWARDS:

First Mention Placed: P. C. Reed, M. D. Smith, C. F. Bowers, H. A. Page, J. Franklin, A. Taermina and R. Patterson, Carnegie Inst. of Tech., Pitts.; E. N. Kaeyer and A. G. Bagley, Columbia Univ., N. Y. C.; W. Harris, George Washington Univ., Wash., D. C.; J. C. Peyton, Atelier Hirons, N. Y. C.

First Mention: M. C. Bert, J. W. Fritz, D. D. McGervey, P. Hohorst, P. F. McLean, B. H. Lawson and C. E. Landefeld, Carnegie Inst. of Tech., Pitts.; A. Perrella, Columbia Univ., N. Y. C.; L. G. Clark and H. W. Naylor, Atelier Hirons, N. Y. C.; E. Olsen and P. R. Rudolph, Atelier Parsons-Chic. A. C., Chicago; H. D. Baker, Princeton Univ.-Graduate Col., Princeton; F. M. Garey, Richmond Archtl. Club, Richmond, Va.; C. R. Ferris, Syracuse Univ., Syracuse; R. Carter and H. Richardson, Univ. of Washington, Seattle; A. G. Clay, Yale Univ.-Sch. of Fine Arts, New Haven.

Mention: L. Ross, H. R. Burger and J. M. Brown, Atelier Atherton, Wilkesbarre; F. W. Clarke, Atelier Birmingham, Birmingham, Alabama; H. H. Price, H. R. Hall, J. A. McPherson, J. H. Shea and T. F. McDonough, Boston Archtl. Club, Boston; L. C. Page, H. C. Kreisle, M. C. Uslan, H. W. Lefkowitz, H. C. Douden, L. L. Broida, V. H. Stromquist, W. J. Bane, J. H. Delo, C. C. Agill, C. J. Billmeyer, H. Carter, W. H. Willis, M. Dyer, W. M. Burke, J. M. Lanese, F. B. Smith, G. A. Brink, K. Snyder and G. A. Fister, Carnegie Inst. of Tech., Pitts.; A. O. Angilly, V. Sberna, I. Tron, J. L. Barth, J. M. Paul, I. Trinin, A. A. Ehrenrich and S. Blank, Columbia Univ., N. Y. C.; V. Pribil, F. D. V. Martinelli, C. Jensen and C. Forrester, Atelier Corbett-Gugler, N. Y. C.; C. E. Bieler, C. H. Kellogg and W. H. Speer, Atelier Denver, Denver; J. H. Lapish; F. L. Soars, F. A. Elliott and T. S. Brown, Geo. Washington Univ., Wash., D. C.; J. W. Hanson, Atelier Hirons, N Y. C.; F. M. Manker, Archtl. League of Indianapolis, Indianapolis; W. A. Jaeger, E. Horley, K. Steinbach, H. P. Whitworth and N. O. Matson, John Huntington Poly. Inst., Cleveland; W. W. Mezger, Los Angeles Archtl. Club, Los Angeles; C. R. Schmidt, 7 W. 42nd St., N. Y. C.; R. L. Morin, 38 W. 54th St., N. Y. C.; H. W Smith, Atelier Owsley, Youngstown; H Silverman, Atelier Licht, N. Y. C.; G. M. Nedved, E. A. Gylleck, A. R. Brown, R. H. Johnson, D. R. Lundberg and T. Ross, Atelier Parsons-Chic. A. C., Chicago; D. A. Campbell, W. W. Ullery and H. E. Dickson, Pennsylvania State College, State College; F. A. Comstock, Princeton Univ.-Graduate Col., Princeton; E. W. Niblet, E. R. Gilbert and L. C. Palmer, Richmond Archtl. Club, Richmond, Va.; B. C. deMello, C. I. Cromwell, W. P. Crabtree, Jr., P. W. Becker, A. F. Eldridge, R. R. Bridges and G. F. Bennett, Syracuse Univ, Syracuse; E. Green, Jr., Swain Free Sch. of Design, New Bedford; C. A. Langzettel, W. W. Haslett, A. B. Bowen, H. Shaw, L. Hauf, Jr., and F. Raudenbush, "T" Square Club, Phila.; E. M. Robison and J. H. Compton, Univ. of Kansas, Lawrence; V. C. Edades, V. L. Annis, D. T. Lopp, H. Schippmann, J. Bonnell, E. R. Duckering, A. E. Fulton, J. C. Jordon, Elizabeth Ayer, V. N. Jones, W. W. Lund and C. W. Haas, Univ. of Washington, Seattle; B. H. O'Connor, Univ. of Texas, Austin; G. Koepp and C. Wilson, Univ. of Oregon, Eugene; G. K. Wenzell, Univ. of Southern California, Los Angeles; R. D. Kelly, A. D. Johnson, W. Yungbauer and C. K. Frensz, Univ. of Minnesota, Minneapolis; A. Harrer, Atelier Wynkoop, N. Y. C.; S. N. Alderman, P. E. Isbell and M. H. Pardo, Yale Univ.-Sch. of Fine Arts, New Haven; A. H. Miller, Thumb Tack Club, Detroit.

H. C.: R. G. Caldwell, Archtl. League of Indianapolis, Indianapolis; W. E. Herrick, Atelier Wynkoop, N. Y. C.

PROGRAM

CLASS "B"—I PROJET.

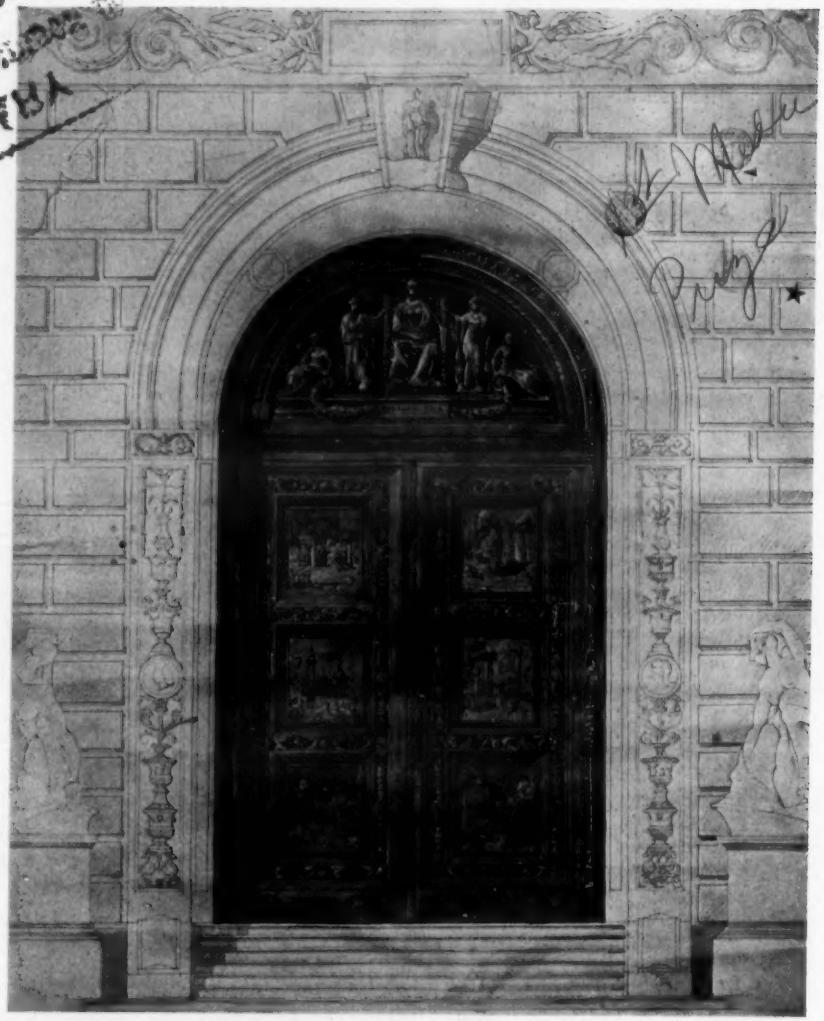
The Committee on Architecture proposes as subject of this Competition:

"A SMALL PRIVATE CHAPEL ON A COUNTRY ESTATE."

In many countries men have been found who, prompted by devotion, built private chapels on their estates. In this project such a chapel is supposed to be directly connected with the residence group which is formed about a court. The circulation between the adjoining sections of the residence is maintained by means of a cloister or connecting passageway. The entrance to the chapel is through the cloister, which acts as a porch.

Whatever style may be assumed, its character should be decidedly domestic, and as the chapel is not the dominant building of the group, its architectural development should be restrained. It will be used not only by the family, but also by the servants.

The greatest dimension of the chapel, exclusive of the cloister, shall not exceed 50 feet.



FIRST PRIZE AND FIRST MEDAL R. NICKEL T. SQUARE CLUB

FIRST MEDAL G. FRASER CORNELL UNIVERSITY

EMERSON PRIZE COMPETITION. A PAIR OF BRONZE DOORS

STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN

FIRST MENTION PLACED W. HARRIS GEORGE WASHINGTON UNIV

FIRST MENTION PLACED A. G. BAGLEY COLUMBIA UNIV.

CLASS "B"-1. ANALYTIQUE. THE SIDE ENTRANCE OF A CHURCH
STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN

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JURY OF AWARD:

R. M. Hood, B. W. Morris, H. O. Milliken, W. L. Bottomley, H. R. Sedgwick, F. C. Hirons, H. W. Corbett, E. A. Dennison, F. L. Ackerman, S. Stevens, J. F. Harbeson and A. DiNardo.

NUMBER OF DRAWINGS: 129

AWARDS:

First Mention Placed: R. L. Linder, Atelier Denver, Denver; A. C. Baker, Dallas Archtl. Club, Dallas; E. Olsen and H. Van Der Lyn, Atelier Hirons, N. Y. C.; G. Chittenden, Los Angeles A. C., Los Angeles; A. A. dePorreca, "T" Square Club, Phila.; A. E. Evans, Univ. of Kansas, Lawrence; P. J. Bitterman, Jr., 551 Knickerbocker Ave., Brooklyn, N. Y.

First Mention: L. T. Pancoast, Cornell Univ., Ithaca; E. M. Highberger, C. J. Pellegrini and C. B. Marks, Carnegie Inst. of Tech., Pitts.; J. A. Williamson, Dallas Archtl. Club, Dallas; L. Rombotis, Los Angeles A. C., Los Angeles; G. H. Levy, 6 E. 107th St., N. Y. C.; J. A. Fletcher, C. G. Thalheimer, J. H. Geissel and W. R. Fisher, "T" Square Club, Phila.

Mention: M. E. Witmer, Boston A. C., Boston; E. F. Sibbert, Jr., L. B. Pickwick, G. W. Teare, E A Hart, L. H. Denler and G. B. Howell, Cornel Univ., Ithaca; A. M. Taylor, K. Matsunei, W. H. Kraemer, C. H. Dornbusch, W. Conley and P. Simonsen, Columbia Univ., N. Y. C.; W. M. Dowling and P. H. Smith, Atelier Corbett-Gugler, N. Y. C.; R. Mira, L. F. LaPorte and E. J. Rutledge, Catholic Univ., Wash., D. C.; L. B. Christman, W. L. Gibb, Jr., H. E. Rudy, L H. Rank, T. G. Tiffany, K. B. Weber, J. O. Cahill, E. F. Hughes, A. W. Chesterman, E. O. Schoonover, A. A. Lewis, B. A. Hamilton, R. V. Murison, L. L. Nusbaum, J. G. Todd, F. H. Floyd, E. W. Klee and J. W. Minick, Carnegie Inst. of Tech., Pitts.; J. F. Smith and H. M. Burnham, Georgia Sch. of Tech., Atlanta; G. A. Daidy, George Washington Univ., Wash., D. C.; E. E. Davenport, Archtl. League of Indianapolis, Indianapolis; E. L. Babitsky, J. E. Miller and E. C. Rising, John Juntington Poly. Inst., Cleveland; P. Goodman, Atelier Licht., N. Y. C.; C. V. Bert, H. R. Gamble, L. L. Wallace, Jr., and H. T. Hamel, Pennsylvania State College, State College; A. Gambell, Portland A. C., Portland, O.; G. McCormick, R. W. Bauhan and H. J. Burden, Princeton Univ.-Graduate Col., Princeton; F. K. Cheetham, J. Schierhorn and G. S. Beach, Atelier Parsons-Chic. A. C., Chicago; E. R. DeShaw, R. H. Doman and M. V. Dittmar, Syracuse Univ., Syracuse; J. J. Welsh, Swain Free Sch. of Design, New Bedford; H. T. Plumer, E. S. Young and E. A. Beihl, "T" Square Club, Phila.; D. K. Frohwerk and F. R. Hibbs, Univ. of Kansas, Lawrence; H. C. Heath and R. L. White, Univ. of Texas, Austin; Doris A. Siebert, Univ. of Washington, Seattle; V. Carlson Univ. of Minnesota, Minneapolis; A. H. Goddard, L. B. Wamnes and E. Penfield, Atelier Wynkoop N. Y. C.; D. Weinstein, C. B. Lewis and D. M. Campbell, Yale Univ.-Sch. of Fine Arts, New Haven.

H. C.: J. Truden, Atelier Corbett-Gugler, N. Y. C.; L. E. Considine, Carnegie Inst. of Tech., Pitts.; G. H. Gibson, Georgia Sch. of Tech., Atlanta; F. O. Paul, Pennsylvania State College, State College; C. H. Siebert, Syracuse Univ., Syracuse; A. A. Graves, R. W. Kerfoot, H. F. Neville and R. B. Bloomgarten, Univ. of Kansas, Lawrence; Rosalie Haas, Univ. of Washington, Seattle; B. S. Georges, H. S. Kelly and W. Douglas, Yale Univ.-Sch. of Fine Arts, New Haven.

THE EMERSON PRIZE.

The gift of Professor William Emerson, offered for the best solution of a decorative problem.

PRIZE—$50.00.

(For conditions governing this Prize Competition, see Circular of Information, Article VIII, Par. 4.)

PROGRAM

The Committee on Architecture proposes as subject of this Competition:

"A PAIR OF BRONZE DOORS."

These doors are destined for the main entrance of a large art museum, the stone opening of which is 9 feet wide and 16 feet high. To facilitate the operation of the doors, it is desirable to cut down their height and weight. At the upper portion of the opening, therefore, is to be a fixed panel or grille, which should, however, form a part of the general composition of the doors.

The modern method of sand moulding has been so perfected that it is possible to cast a door in sections, welding these sections together after casting. This permits a depth of modelling and undercutting approximating the effect of the older and more expensive process, known as the lost wax process. In consequence the relief may have all the values, from high lights to deep shadows of undercutting, limited only by the thickness of the doors. The effect may even be supplemented by complete penetration at certain points, if desired.

JURY OF AWARD:

R. M. Hood, B. W. Morris, H. R. Sedgwick, F. L. Ackerman, E. A. Dennison and H. W. Corbett.

NOTE:

H W. Corbett did not serve on Jury for the awarding of Emerson Prize.

NUMBER OF DRAWINGS SUBMITTED: 17

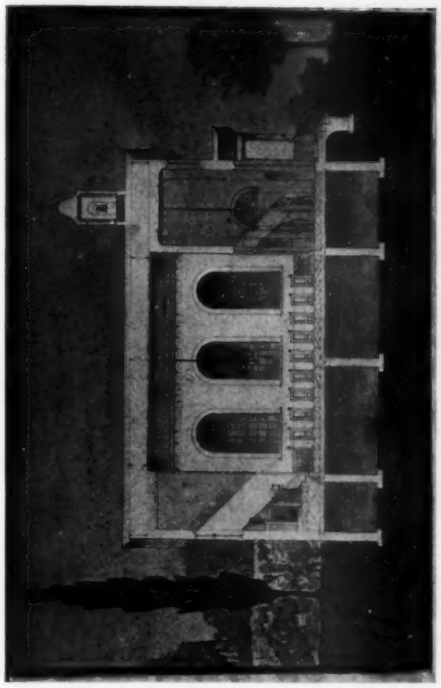
AWARDS:

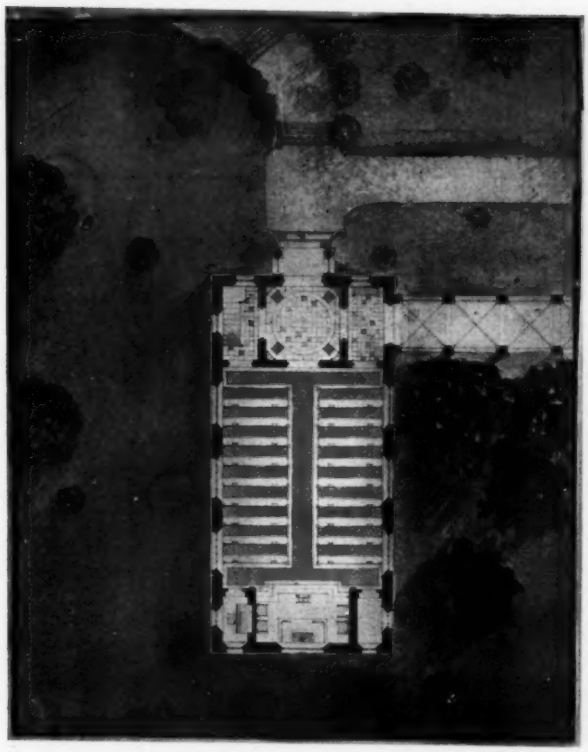
Emerson Prize $50.00: R. Nickel, "T" Square Club, Phila.

First Medal: G. Fraser, Cornell Univ., Ithaca; R. Nickel, "T" Square Club, Phila.

Second Medal: E. K. Hunter, W. H. Harrison, H. G. Spielman and C. M. Stotz, Cornell Univ., Ithaca; R. K. Galbraith, Archtl. League of Indianapolis, Indianapolis, Indianapolis; R. A. Fisher, Univ. of Pennsylvania, Phila.

Mention: H. Banse, M. B. Steinmann, V. S. Swan and F. H. Robinson, Cornell Univ., Ithaca; N. D. Kutchukian, Carnegie Inst. of Tech., Pitts.; A. G. Terrell, Columbia Univ., N. Y. C.; K. A. McGrew, R. S. Potter and L. H. Pries, Univ. of Pennsylvania, Phila.



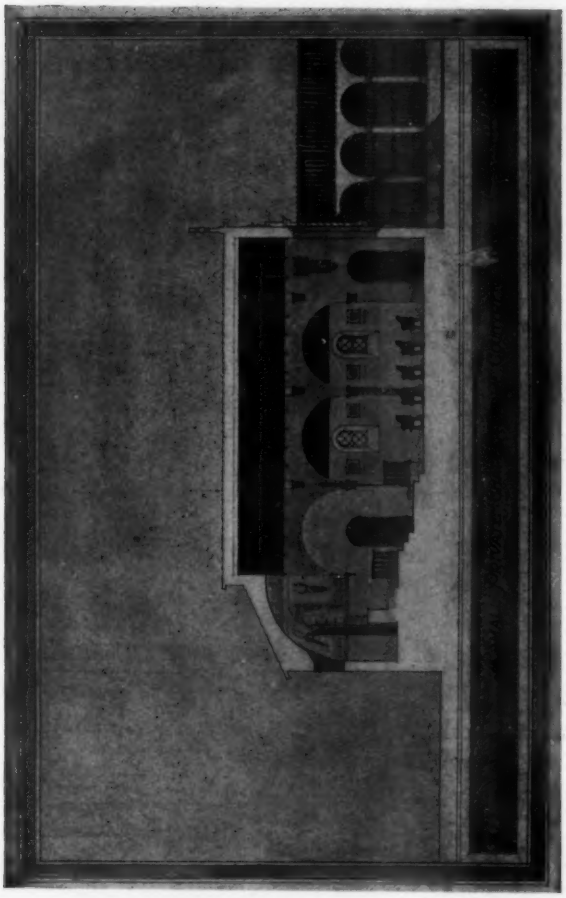


FIRST MENTION PLACED

H. VAN DER LYN

ATELIER HIRONS

CLASS "B"-1. PROJET. A SMALL PRIVATE CHAPEL ON A COUNTRY ESTATE
STUDENT WORK—SOCIETY OF BEAUX-ARTS ARCHITECTS

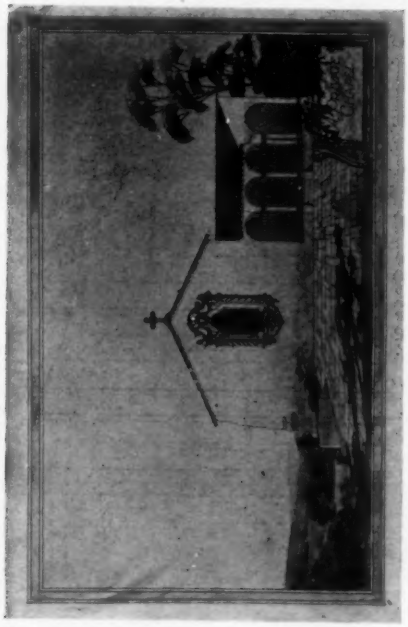


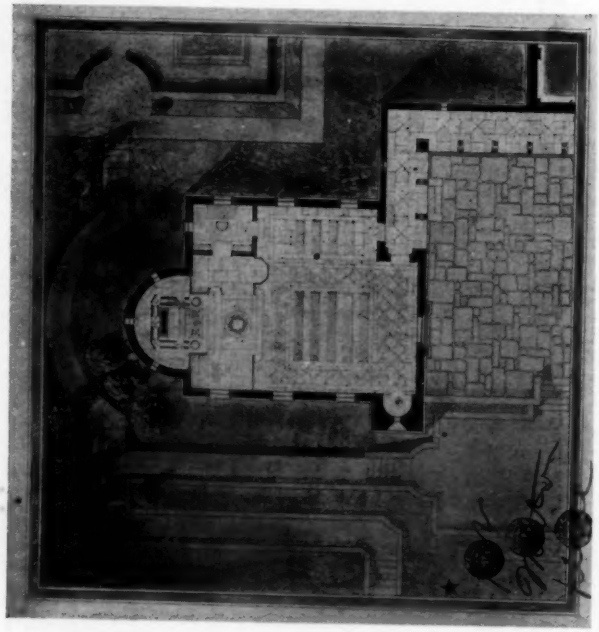
FIRST MENTION PLACED R. L. LINDER ATELIER DENVER

CLASS "B"-1. PROJET

A SMALL PRIVATE CHAPEL ON A COUNTRY ESTATE

STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN





EDITORIAL

Confidence

WHAT is it that builds houses?

Men? Money? Materials? Architects? Engineers? Most assuredly. But what is behind the men and the money and materials and architects and engineers? What is the starting point of it all? Confidence. Assuredness in the future; the dead certainty that things are shaping up properly; the knowledge that the future holds promise of industrial achievement—money-making possibilities.

And what of the future?

The outstanding fact in it, of course, is that our national life is now being guided by a new administration. This is said simply because it stands out as the one predominating fact in the establishment of national confidence.

It is only natural that such should be the case. Human nature is so constituted that change brings stimulation of confidence. A new administration means a new era, in the sense that it puts before the people of a nation limitless possibilities on the part of those chosen by an electorate to run the affairs of that nation.

Everywhere among architects there is the feeling that the time has come to go ahead with things. Spring, with its building activities looming closer and closer, is at hand; and all signs point to a "go ahead" policy among architects.

It is interesting to note that among the many prominent industrial leaders and financiers who speak today of the immediate future with decided confidence are: Thomas W. Lamont, of J. P. Morgan & Co., Elbert H. Gary, Chairman of the United States Steel Corporation; Francis H. Sisson, vice president of the Guaranty Trust Company of New York, and Daniel G. Reid, the financier.

Such is the trend of thought among thoughtful men.

AND what are the physical tendencies of the situation?

Walter Stabler, comptroller of the Metropolitan Life Insurance Company, very recently told the members of the Board of Estimate of New York City that there had been much more activity noticeable so far as inquiries for loans for building purposes went, since the passage of the tax exemption ordinance of that city (which in itself was almost an insignificant exemption) was passed.

Two million dollars for "walk up" apartments were loaned by Mr. Stabler's company in *one week*.

In Chicago the Corn Exchange National Bank's new "own-your-own-home" accounts campaign produced more than 3,000 inquiries and 300 *accounts* in the *first day*. This was in the last part of January.

In Philadelphia, the City Council has made 15 million dollars immediately available for municipal structures, and Controller Hadley of that city has announced that 100 million dollars' worth of loans authorized and unissued could be put into use if needed.

San Francisco's realty sales for January, 1921, totaled very nearly $6,000,000. There were 764 sales. These two facts of themselves are of no great importance, but the fact that 6 million dollars and the number of sales is well up to the past year, and that active and result-producing inquiries for real estate remain good, are of importance.

These are isolated cases of large cities, but they indicate the trend of the collective business and industrial mind, and the return of confidence.

In the Third Federal Reserve District the Federal Reserve Bank of Philadelphia points conclusively to a general business improvement by means of official data.

New England's textile industries are nearly "back to normal" and the general business conditions in that section of the country are, therefore, in for rejuvenation, recuperation, and results.

Thus it goes throughout the country. Everywhere there are signs, not of "normalcy" achieved, but of a distinct, definite trend toward that much desired state. It is pleasing and justifiably heartening to note that the thing has gotten under way, and that we are at last headed toward that recuperation of industry which foreshadows the complete industrial confidence so necessary in the great building activities which must take shape this spring.

XUM

The American Specification Institute

Shortcomings of Specifications

THE AMERICAN ARCHITECT received recently a letter discussing the subject of specifications, which is here given in part. The writer arrived at his rather tersely expressed opinions through having spent many years as a general contractor's estimator, although his technical training was for the profession of architecture. We may not agree with his opinion of the things that cause the production of unsatisfactory specifications as it is readily understood that a great many things are contributory. It is a statement, however, that may form the basis for thought and discussion. If this is the result, a contribution has been made to this most important subject.

"Specifications that are unsatisfactory to the contractor and ultimately to the architect and owner, are the result of certain factors that influence their waiting. They are:

Ignorance.
Indolence.
Cowardice.
Knavery.

One or all of these may be the cause, but one at least is present. The degree of badness varies with the number of these elements involved.

The only excuse for ignorance is the lack of available information, which to a great extent is admitted. The data does exist, however, in some form and is procurable. Of ignorance, the inability to write clearly is an important factor. All trained draughtsmen very easily express their ideas by lines and conventional signs that are universally understood. Our schools do not teach us how to express the same ideas in words in as clear and direct a manner. This phase of ignorance can be overcome.

Indolence is a common characteristic, in some degree, to most people. Ignorance is a result of indolence to a great extent and until indolence is eliminated the other will be present. The writing of a specification worthy of being so considered is the result of plain, hard work. The idea that a few hours given to the writing of the specification after the plans are completed is an exploded theory, especially for the modern building embracing so many complex problems.

Cowardice is sometimes the result of ignorance and is a mental characteristic of the specification writer. It is the reason for non-assumption of responsibility in definitely stating the things that the contractor shall provide and do. There is no other business in which direct responsibility is evaded as brazenly and openly as is done in the writing of specifications for building construction. Honesty, frankness and nonevasion are the basis of sound business. A person who is afraid of his own judgment, knowledge and ability cannot possess the courage to produce a satisfactory specification or plan.

Knavery is indicated in specifications that are susceptible of double interpretation. The favored contractor or material producer can have a pre-bidding explanation that insures successful competition in return for some perquisite. This characteristic is, most happily, much less prevalent than it was two or three decades ago. There is abundent evidence of this."

This will appear to some as a rather harsh indictment of the writer of unsatisfactory specifications, but it is a feeling quite common among those who have devoted their energies to the interpretation of plans and specifications as estimators. It is also the feeling of many who have risked their time and money in constructing structures that were not clearly and adequately defined by specifications and drawings. The building industry, as a whole, will benefit by the elimination of this unsatisfactory factor.

Mr. William B. King, of the Bar of the Court of Claims, Washington, D. C., in a very able and notable address before the recent convention of the Associated General Contractors, discussed this subject, in part, as follows:

"This country is deficient in specifications of material and methods of work. It ought to be possible in the case of almost every material to say that it shall conform to a given grade of fixed and known standards prescribed by a central organization. This would take the place of the old and inexact form. 'Unless otherwise prescribed, all material shall be of the best quality.' . . . The U. S. Bureau of Standards has published some standards of quality. There are standard codes of practice for electric and gas installation. Very fine construction work has been done by the American Society for Testing Materials. These definitions have generally been of materials and have not included methods of doing work. Like standards and exact definitions should be made of every material used in construction and of every process of installation. The result would be that every contractor would know at once exactly what he was required to furnish and would not be dependent upon interpretation by any engineer and his subordinate."

As appears from its prospectus published in this journal February 16, the American Specification Institute proposes to standardize the "methods of doing work" and of "every process of installation," thus completing the work initiated by such organizations as are mentioned above by Mr. King. The demand for this particular work seems to be very general and it is by a concerted effort of *all* interests and persons affected by specifications for materials and labor, that a speedy and effective improvement in this condition will be made.

Those desiring further information concerning The American Specification Institute may secure it by addressing Gardner C. Coughlin, secretary pro tem, Room 1144, American Bond and Mortgage Building, Chicago, Illinois.

Some Examples of American Chippendale

A Remarkable Exhibition of the Work of the Early American Craftsmen in Furniture

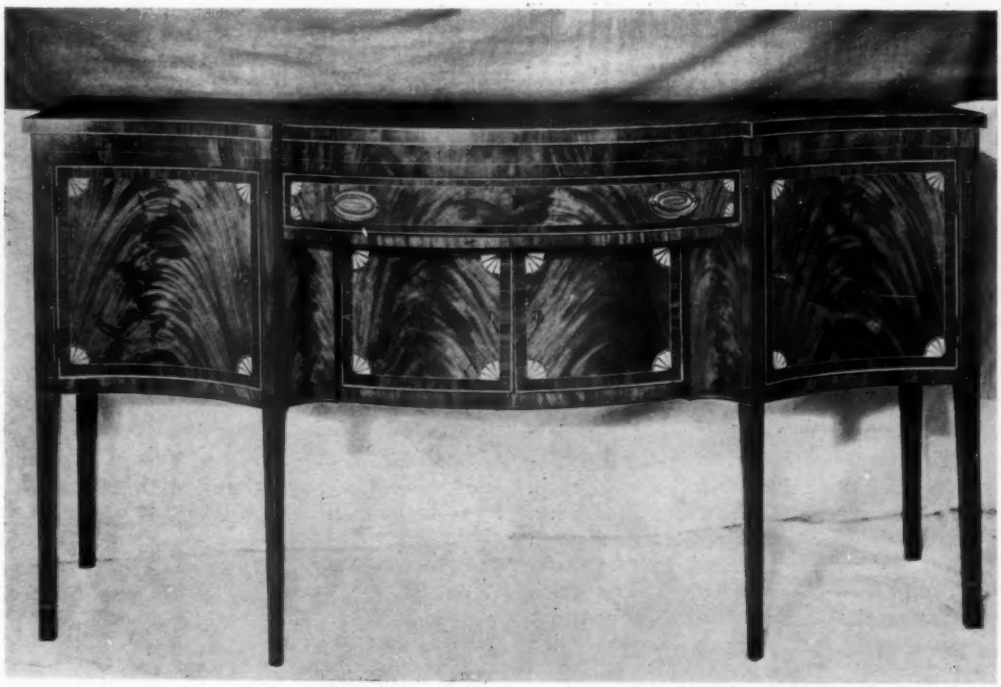
The collection of American and English furniture, gathered by Mr. Louis Germeau Myers, some notable examples of which are illustrated in this issue, was before its dispersal by auction, one of the most notable of the work of the early craftsmen in furniture both in England and the United States.

The majority of the large number of pieces are in an original condition and but few have in any way been "restored." This fact makes these examples of our most interesting period of furniture design of first importance and affords an absolutely reliable suggestive value to the furniture craftsman in this country.

Own Your Home Competition

Through the courtesy of the Own Your Home Exposition, Inc., we are permitted to illustrate in this issue six of the premeated designs entered in a recent competition. We are advised that these plans are to be published in book form by the Building Plan Holding Corporation of New York, of which Moore, McCarr, Gilchrist & Associates, Inc., are exclusive distributors.

In the resumption of home building, inevitable in the near future, the prospective home builder will be able to find the type of house and of the material exactly to suit his needs among the many highly meritorious designs that have been submitted. This propaganda for home building is already achieving the success it merits as a promoter of the best phases of home life, another development of a better Americanism.



AMERICAN HEPPLEWHITE MAHOGANY SIDEBOARD, FROM THE MYERS COLLECTION. PERIOD ABOUT 1795. THIS PIECE IS SAID TO REPRESENT THE HIGHEST TYPE OF AMERICAN SIDEBOARD

For Better Specifications

Further Letters from Readers with Reference to the American Specification Institute

There is, undoubtedly, a great need in the profession for better specifications, which means better specification writers. Examination of a number of specifications leads one to the same conclusion suggested in your letter, that the specifications now produced, taken as a whole, are the least creditable portion of the output of architects' offices.

Our own experience is that even after the most careful and painstaking preparation certain specifications, when tested by actual use in connection with the plans, show a number of what may be termed "loopholes," and in certain portions they fail for want of certain definite descriptions.

Unfortunately most of the defects are brought to light not during the period of estimating, but after contracts are let and work is started. At this ime the weak places appear and any changes that become necessary entail additions to the contract and explanations without end.

Your "American Architect Specification Manual" is undoubtedly a step in the right direction, and we believe that the formation of a Specification Institute, together with a department in THE AMERICAN ARCHITECT devoted to specifications, would present the opportunity for a decided improvement in specifications. FAVROT & LIVAUDAIS, LTD.

New Orleans, La.

We agree with you that there is great need in the profession for better specification writers; also that the specifications now produced, taken as a whole, are the least creditable portion of the output of the average architect's office. Any steps which can be taken toward the improvement of specifications will be well worth while.

In our own experience we developed some time ago a duplicate card file of specifications, each separate card having a typical specification paragraph, and all filed under their various headings in such a way that the specification writer, by starting through the files, would pick out the various paragraphs which applied to the work in hand and dictate such additional paragraphs or any new paragraphs which might be required for the immediate job upon which he was working.

After the use of this system for several years we have acquired a large number of typical specifications for various sorts of buildings to which our specification writer is now more apt to refer as prototypes for his specification work than to the card file system.

We are not sure that the formation of a Specifiation Institute would be the answer to the question or prove an effective method of carrying on the work. Another item which enters into it is the difference in the details of the specifications in various parts of the country where we find that very radically different practices obtain, and a specification which is correct for New England may not be correct for Texas. We refer to the kinds of materials available more than to methods of using them, although even the latter are affected also.

SCHENCK & WILLIAMS.

Dayton, O.

We wish to acknowledge and to indorse your proposed carrying out o fa program to produce better-specifications an dto assure you if there is any way in which we can help in this matter we will be glad to do so.

LOCKWOOD, GREENE & Co., Engineers.

Boston.

It is quite obvious that anything that will tend to improve the writing of architects' specifications would be very desirable, and if you can work out a plan whereby such an Institute as you suggest can be made effective, it will accomplish a very good purpose. RANKIN, KELLOGG & CRANE.

Philadelphia.

Want Technical Man in War Department

The American Engineering Council of the Federated American Engineering Societies sent to President Harding a communication asking that an engineer be appointed Assistant Secretary of War. Another communication requested Mr. Harding to name an engineer for the vacancy on the Interstate Commerce Commission. Both communications were authorized by vote of the Executive Board of the Council, of which Herbert C. Hoover is president, and which represents 150,000 American engineers.

The appeal to Mr. Harding to select an engineer as Assistant Secretary of War says that this position of which are concerned with engineering." The organization says that the appointee should possess technical knowledge and be familiar with the cost of construction and operation. Mr. Harding was asked "to give earnest thought to the selection for the Interstate Commerce Commission of a man with the training and experience of an engineer familiar with transportation problems. The body established to regulate the commerce, the carriers and the ways of communication, embracing so many engineering features, should number among its nine members men of engineering training and experience."

AN AMERICAN HEPPLEWHITE CHINA CABINET

This cabinet is one of a pair from the Louis G. Myers collection, and was undoubtedly made in Philadelphia about 1790. It is of figured mahogany with wide bands of satinwood. The center draw encloses a desk. Height, 9 feet; width, 6 feet 1 inch. Depth at center, 23 inches; at wings, 21 inches.

XUM

What About the Personal Equation?

AT a time when every person should be considering the problem of reconstruction as a *personal* problem, we have an unlovely vista of legislative committees without number, small groups of forward-looking citizens, investigating societies and even individuals studying conditions, suggesting constructive programs, and occasionally putting into motion some sort of reconstructive activity.

That, as every thinking man knows, is not at all correct. This is not saying that there are not occasions—and plenty of them—when Government investigations become necessary, because such instances are unfortunately only too many. But it is saying that the continual shifting of responsibility has become a matter of habit with us as a nation. "Passing the buck," as slang so expressively puts it, is becoming more and more an all-year-round sport with us. We take it for granted that *someone else* will investigate, make suggestions, and produce results. We continually put it up to the other fellow.

Now, this is doubly deplorable in a republic. Nothing could possibly be more harmful to good citizenship, for good citizenship consists in *individual thought*, in the working out of the personal equation in all matters. No nation can stand whose people do not think as individuals. History has proved that time and again. The thinking group—how pitifully small it is!—can lead the unthinking crowd just so long. It is then up to the latter to put into practice what it has learned. Education presupposes that. Knowledge is not power and is not useful unless it is applied. Its application in this instance consists in nothing more difficult than daily thought.

APPLIED to the building and housing problems, this matter of the personal equation becomes more and more important.

How many persons, during the recent building trades investigation in New York, looked into even the name of the so-called "Calder Committee" was not that at all? How many would know what the Senate Committee on Reconstruction and Production was, and what it did, or is doing? How many knew of its existence? How many have the faintest idea of what constitutes "restraint of trade" and what the so-called Sherman anti-trust law really can and ought to do?

Precious few indeed.

It may be argued that all this is academic. It may be said that the daily press contributes a wealth of information for its readers. Both assertions would be correct, and both would be wrong. Correct in that anything suggestive of constructive education and real substantiality of thought and intellectual processes is always considered academic by the majority; incorrect in that the few questions suggested above as a test of the average person's economic and political astuteness are practical questions, affecting the daily life and activities of eery inhabitant of the United States. As for the daily press, there is information, and of value, but it is submerged and presented in decidedly unattractive guise. What is more, the press exists, from a financial standpoint, because it "gives" the people what they want," and if one studies the readers of daily newspapers in almost any public place and in private homes, one finds that the people seem to want the sporting pages, scandal, sensation, and the "daily comic page." So that the press would not appear to do much good with its wealth of information on the more serious side of national life.

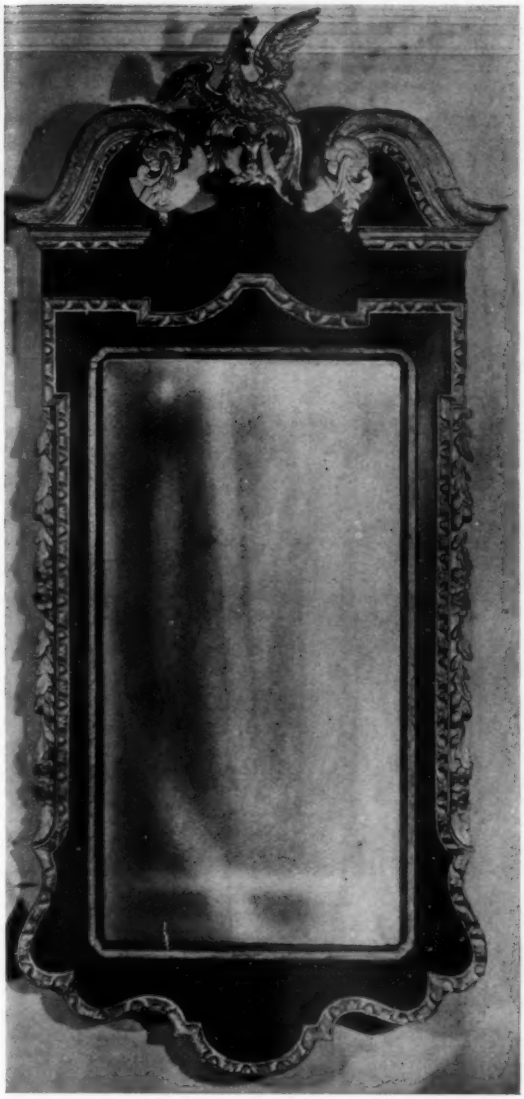
ONE illustration and we are done. In the so-called Clayton act, passed to eliminate some of the graft in the supplying of equipment to railroads by private supply and repair companies, there was one word—"substantial"—which provided the loophole for the corporations which the act sought to check. It is not necessary to dwell upon the reason for that word. The fact remains that it is there. It is what may very properly be termed a weasel word. It works in precisely that way.

Now, any citizens of this country who was duly qualified to vote could have obtained a copy of the congressional record with that proposed act in it. He could have read it in its entirety in a very few newspapers. There were other ways of looking into that act, *before it was passed*.

Yet how many voters troubled themselves to look it up? How many would have read the act in the newspapers? Again the precious few. Yet that word "substantial" *was* substantial enough to cost the individual more to live, because he paid more for clothes and food and building materials on account of it. This is perfectly apparent to architects.

What is the matter with us? Why do we permit such loopholes in our legislation? Why is it that we so neglect the personal equation in everything, and particularly in the problem of reconstruction?

The editors would like to hear from you. Where do you think the trouble lies?



AMERICAN MAHOGANY AND GIBB MIRROR. SIGNED ON BACK BY JOHN ELLIOTT OF PHILADELPHIA, 1750.

AN AMERICAN CHIPPENDALE MAHOGANY CABINET TOP DESK. PERIOD ABOUT 1750.

TWO NOTABLE EXAMPLES FROM THE MYERS COLLECTION OF EARLY AMERICAN FURNITURE

Business Conditions

THE process of placing business upon a level fairly comparable with that which prevailed prior to 1914 is in progress, says the National Bank of Commerce in New York. This is particularly the case with regard to iron and steel, the necessary materials for practically every industry.

Retail prices and labor costs are the two problems of the day, according to this bank. Labor costs must be readjusted to new price levels in an orderly fashion with the greatest possible recognition of the social problems involved. Retail prices must be lowered. Retail prices have naturally lagged behind the downward movement of wholesale prices. Their adjustment has been further delayed, during the past few years, by a temporary speculative element which has come into the circle of distribution.

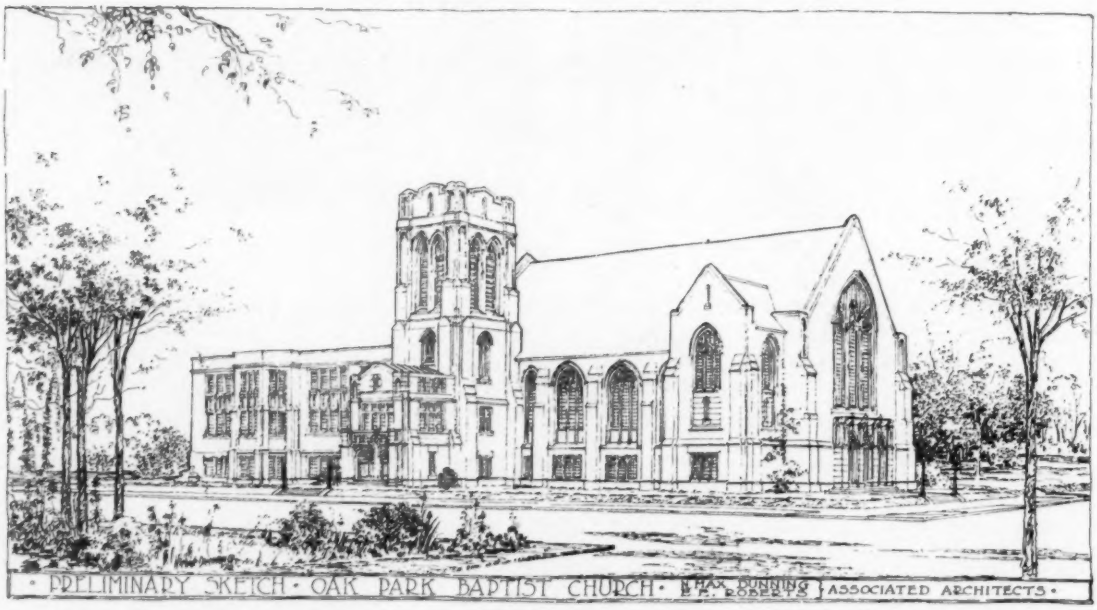
"These speculative middlemen," states the Bank, "who for the most part serve no economic purpose, have largely been eliminated by rapidly falling commodity prices, but the effect of their presence is still felt to some extent in the unduly high cost of much of the present retailers' stocks, as well as in a general lowering of the standards of commercial morality and a disregard of trade conditions."

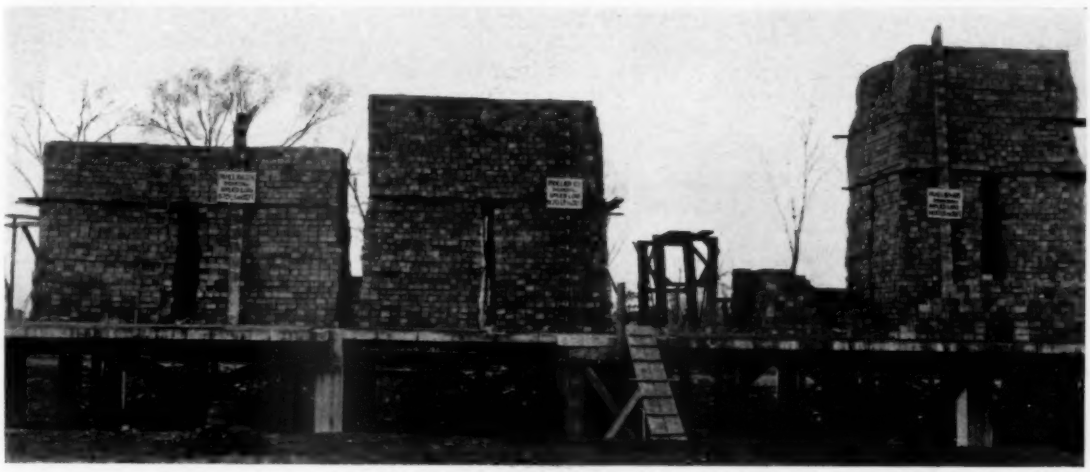
It is significant that the Bank believes that precipitous declines in commodity prices are passed, except in the case of iron and steel and a few other commodities where the full forces of readjustment have not yet been felt. It is pertinent to state here that, while it is difficult to conduct business at a profit in a period of sharply declining prices, there is no reason why normal business at a satisfactory profit should not be entirely possible. The Bank points most significantly to the fact that the enormous expansion in the United States during the thirty years following the Civil War was carried on in just such an era of gradually declining prices.

The following paragraph occurs in a recent summary of business conditions issued by the National Bank of Commerce:

"It is time to come absolutely to a realization that the period of semi-speculative business in staple lines has passed. Not only must the machinery of trade be readjusted to more normal price levels, but there must be a return to the mental attitude of the time when strict integrity and a broad and thorough knowledge of trade conditions were recognized as among the necessary assets of the well-established business."

It would benefit business considerably if the words "It is time to come *absolutely* to a *realization*" could be shouted from every housetop in the country.





LOADING OF PANELS *H, J* AND *K* AT THE TIME OF THE NOVEMBER TEST
Panels are lettered right to left

Tile and Concrete Floor Shows to Advantage Under Test

Bureau of Standards Investigation Produces Further Valuable Design Data

FURTHER interesting results have been obtained by the Bureau of Standards in their continuous test of concrete and hollow tile floors under different conditions of loading and reinforced in two directions. The first part of this test was published in THE AMERICAN ARCHITECT for August 11, 1920, and since then additional investigations have been made under a different loading. In view of the numerous inquiries we have received regarding this type of floor construction, we have deemed it advisable to present this recent information. The different stages of the test will be referred to as the February test, the April test and the November test.

It will be remembered that this test was conducted under the supervision of W. A. Slater, Engineer-Physicist of the Bureau of Standards, upon panels designed as in Fig. 1, for J. J. Whitacre, Waynesburg, Ohio.

Before the slab was first loaded in December, 1919, four posts were placed under the slab in each panel. These posts were of such a length that their upper ends came within about 3 in. of the bottom of the slab. These posts were provided in order to insure safety in case complete failure should occur with the slab under load. Up to April 22, 1920, the end of the April test, none of the panels had deflected sufficiently to cause the slab to rest upon the posts.

Within a few weeks it was noted that the slab of panel *F* had deflected while standing under full load so that it rested upon two of the posts. The other two posts were free of the slab. The posts formed the corners of a rectangle under the center of the slab about one-fourth the size of the slab. The location of the posts in the other panels was approximately the same as those in panel *F*.

After the completion of the April test the deflection apparatus had been removed and the further deflection of the slab could not be determined except by measurement of the curvature of its under surface, assuming that originally it was a plain surface. By this means the deflections shown in Table I were found just previous to the November test.

Fig. 2 shows the conditions of the loading at the completion of the April test. The load remained as shown in this figure until late in the summer of 1920, when practically all the load was removed from panels *R*, *L* and *Q*. No further changes were made before the November test.

At the beginning of the November test panel *H* had an applied load of 730 lb. per sq. ft., panel *K* had 505 lb. per sq. ft. and panel *J* had a load varying from 90 to 280 lb. per sq. ft. in different parts of the panel.

The intensities of the load per square foot, stated in this report, are based upon the areas given by the

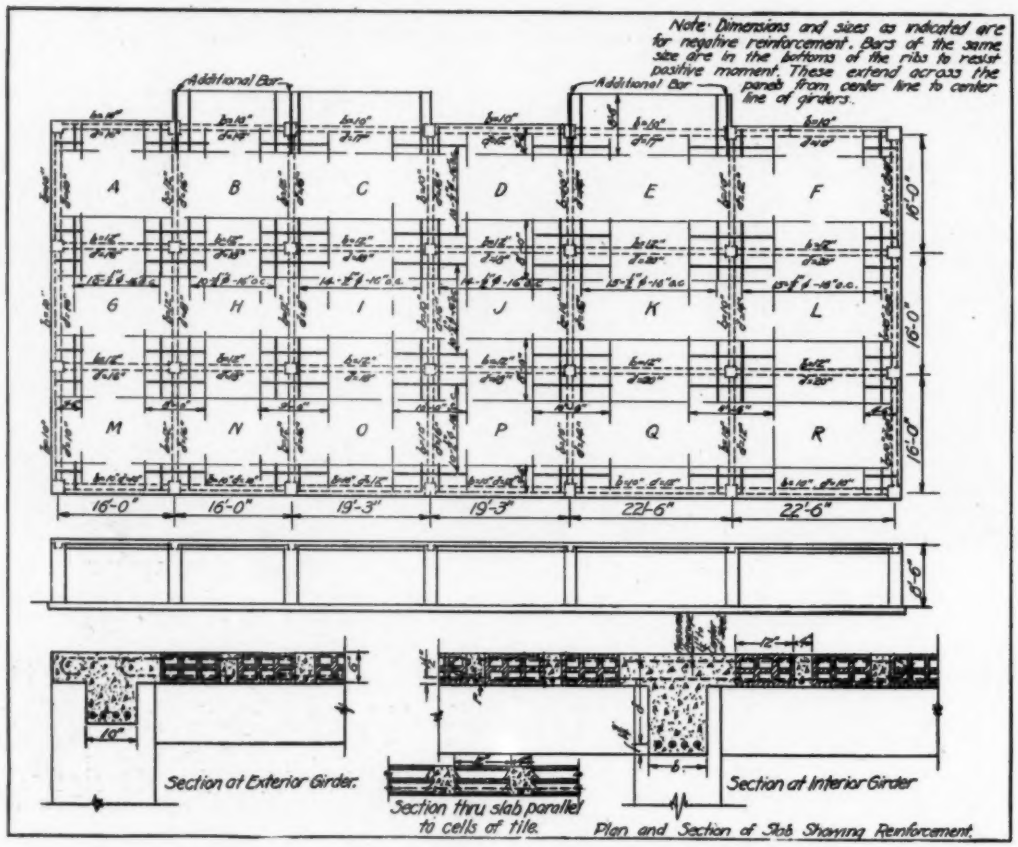


FIG. 1. PLAN OF TEST SLAB, SHOWING REINFORCEMENT
Cross sections indicate method of placing tiles

TABLE I.
MAXIMUM LOADS AND SUMMARY OF DEFLECTIONS.

Panel	Applied Load: After first test (Apr., 1920)	Applied Load: Before second test (Nov., 1920)	Applied Load: After second test	Deflection—Inches: After first test (Apr., 1920)	Deflection—Inches: Before second test (Nov., 1920)	Deflection—Inches: After second test
H	730	730	1413	.68	1.0	1.40
F	370	370	(b) 200	1.72	2.6	2.02
J	(a) 190	(a) 140	1184	...	0.4	2.03
K	505	505	920	1.32	2.3	3.00

(a) The intensity of the load varied greatly in different parts of this panel.
(b) This is a rough estimate of the equivalent uniform load upon this panel after the November test.

product of the clear spans, that is, the intensities of load are obtained by dividing the total panel load by the area within the inner faces of the supporting girders.

This method of computing the intensities of the loads is consistent with the ordinary practice in which the clear span is used for the purpose of computing moments. It was believed also to be nearly exact, and was used as the basis upon which the

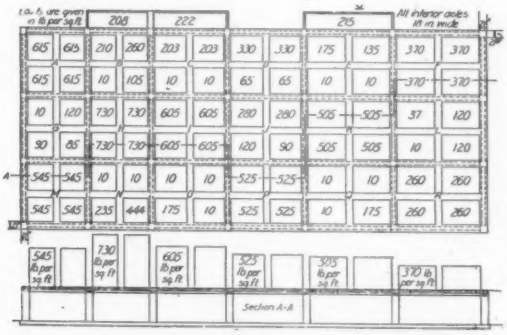


FIG. 2. DIAGRAM OF FINAL LOAD
Shifting of load commenced April 3, and was completed April 22, 1920

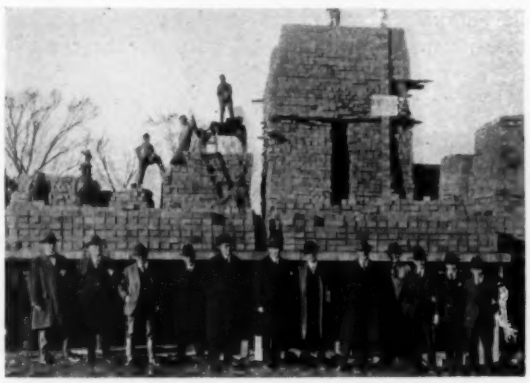
loads mentioned in the article which appeared in THE AMERICAN ARCHITECT, August 11, 1920, were computed. It has since been shown that the moment coefficients found by means of these loads and the measured stresses are from 8 to 10 per cent. too low. Since the intensity of the load is a nominal matter and since a large amount of work and danger of confusion would be involved in restating the loads on a different basis the previous method of computing the load is continued. However, for computing moment coefficients a load 8 per cent. smaller than that found in this way has been used. This gives almost the same results as would be obtained by basing the intensity of the load upon the total area of the panel between the center lines of the supporting girders.

While it was evident that the cracks had opened slightly between the April test and the November test they were still generally quite small and no new cracks were found. At the beginning of the November test postage stamps or other gummed paper patches were pasted across some of the more significant cracks as a means of detecting any opening of the tracks. Frequent inspection of the cracks was made during the ensuing test.

To furnish loading material for the three panels tested, bricks were taken from adjoining panels. These were laid upon platforms of 2-in. planking which had been placed upon the top of the stacks of brick already on the panels. The layer of planking was necessary in order to insure stability of the stacks. For the sake of safety and in order to secure maximum loads with the least height the stacks above the planking were made solid, that is, no aisles were provided as in the stacks below the planking. The stacks of brick were of such height before the planking was used that it was believed that the additional loads would be carried down to the slab, without arching to the edges of the panels. In spite of the precaution taken to secure maximum loads with minimum heights it was not practicable to carry the loads high enough to cause failure of the slab in any of the panels.

An effort has been made to obtain some information from the results of this test on the amount and distribution of load on the girder. Since no strain gage readings were taken dependence has to be placed upon the appearance of cracks to show when the yield point was reached.

From the size of the cracks at the center of the span of girder *J K* it seems certain that the yield-point stress of the steel reinforcement had been reached at the maximum load. On account of the great amount of deformation which could occur without appreciable increase of the stress it seems certain that the stress in the reinforcement could not have been greatly in excess of the yield-point



CLOSE-UP OF PANEL *H* UNDER LOAD

stress. Taking this stress in the reinforcement at 46,300 lb. per sq. in. (determined by tests of specimens of the girder reinforcement) the resisting moment in the girder is found to be 1,335,000 inch-pounds.

Assuming triangular loading, a loading which increases uniformly in intensity from zero at each end of the girder to a maximum at the center of the span, the computed coefficient *K* in the formula,

$$K = \frac{M}{Wl},$$

was found to be 1/16.

This is the coefficient which would occur with triangular loading if the ends of the girder were fixed. It is known, however, from the observed conditions of the tests, that the ends of the girders were not entirely fixed and, therefore, the loading can not have been triangular. A consideration of the limiting conditions indicates (1) that the loading probably is more nearly uniform than is triangular distribution, (2) that the moment coefficient probably was less than 1/16 and consequently (3) that the load was probably greater than that given by the method shown in Fig. 3 which was assumed for computation.

For the other girders the cracks were not large enough to indicate that the yield point of the steel had been reached and no attempt has been made to compute moments for these girders.

Due to symmetry of arrangement the four girders around panel *H* should be expected to carry approximately one-fourth of the total live and dead load supported by this panel. On this basis the load applied to the girder *H I* (between panels *H* and *I*) by panel *H* was 82,500 lb. Adding 30,500 lb., assumed to be applied to girder *H I* by panel *I*, the total load on girder *H I* is found to be 113,000 lb. The girder *H I* was 12 in. in width and 15⅛ in. in depth from the center of the top reinforcement to the bottom of the girder. The girder was reinforced near its ends with U-shaped stirrups made from ⅜

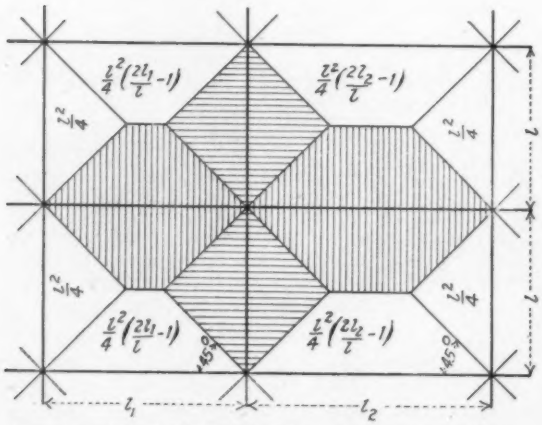


FIG. 3. DIAGRAM SHOWING AMOUNT OF LOAD ASSUMED TO BE CARRIED BY GIRDERS

in. round bars and spaced 3 in. apart in a horizontal direction. The stirrups were anchored at their ends and were inclined about 60 degrees with the horizontal.

The computed shearing stress based upon the load of 113,000 lb. was 376 lb. per sq. in. The computed tensile stress in the stirrups is 36,000 lb. per sq. in. In the girder diagonal tension cracks appeared at the highest load, but these were not large.

It is not known accurately how much load was carried by the girders on the long sides of the oblong panels. However, any assumption as to the amount of load carried by these girders which is not entirely unreasonable gives a shearing stress which is

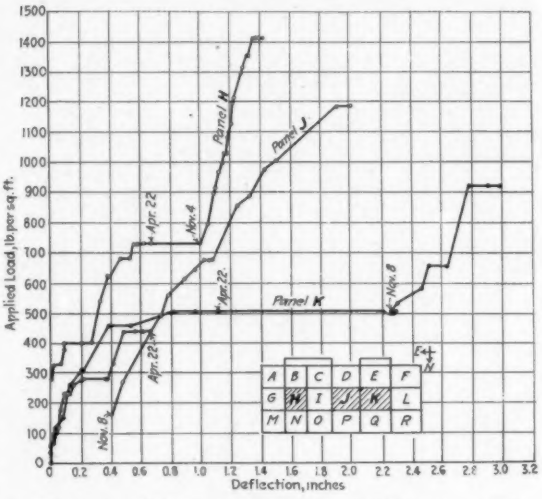


FIG. 4. CHART SHOWING AMOUNT EACH PANEL DEFLECTED AT DIFFERENT LOADINGS

considerably smaller than that computed for girder *H I*.

With the assumption of a uniform distribution of shear around the edges of the slab in panel *H* the shearing unit stress in the ribs of this panel was high when the maximum load was in place. If, as seems probable, some of the ribs carried more load than others, the maximum shearing unit stress must have been still higher.

Assuming that all the ribs carried the same amount of load to the girders the total shear at the end of each rib was 8,075 lb. The north-south ribs had in contact with them the ¾ in. side walls of the adjoining tiles. If these side walls were fully effective with the rib in resisting shear the maximum shearing unit stress in the north-south ribs was 335 lb. per sq. in. The east-west ribs had no tile walls in contact with them. Assuming that the 4-in. concrete rib carried the total shear the maximum shearing unit stress at the ends of the east-west ribs was 460 lb. per sq. in.

When it is considered that the ribs near the middle in each of the two directions probably carried more load than the average it will be realized that the shearing stresses were unusually high. No stirrups were employed, but the longitudinal reinforce-

ment in the tops of the ribs was thoroughly anchored.

Tests which are on record indicate that with thorough end anchorage of the longitudinal reinforcement of beams which have no stirrups or bent-up bars, diagonal tension failure may be expected at a shearing stress not greater than about 250 lb. per sq. in. for concrete such as was used in this test. If this is true it seems reasonable to assume that the difference between this value of 250 lb. per sq. in and 460 lb. per sq. in. (the shear calculated upon the concrete rib alone) must be due to assistance from the tile walls for the north-south ribs or to the concrete which ran into the tile cells in the east-west ribs.

There is more uncertainty as to the correctness of the computations for shear in the oblong panels than in the square panels, but the indications are that the shearing stresses in the ribs were lower for panels *J* and *K* than they were for panel *H*.

The deflections for the April test and the November test are given in Fig. 4. The deflection at the center of panel *H* had increased from 0.68 in. at the end of the April test to about 1.0 in. at the beginning of the November test. The deflection in panel *J* had changed very little, but that in panel *K* had increased about 1.2 in. between the April test and the November test. In view of the fact that the load on the slab during this time was about nine, or more, times as great as standard conservative design would recognize as a safe live and dead load, this increase in deflection is small. For all the panels the rate of deflection with increase of load was about the same for the high load as for the low load.

Since the deflections did not increase more rapidly in the latter part of the test than in the early part it seems that the bending stresses can not have been increasing very rapidly either. Also, the cracks did not open any more rapidly toward the end of the test than with a lower load.

These facts suggest the possibility of arch or dome action in the slab. If such action occurred it seems proper to recognize it as a source of strength in any slab in which it is reasonable to expect it to be present.

The Joint Committee recommendations for the design of slabs supported around their edges on girders would recognize the slab of panel *H* as suitable to carry a safe load (sum of live load and dead load) of 83 lb. per sq. ft. or a safe live load of 33 lb. per sq. ft. The yield point of the steel used to reinforce this slab was 54,000 lb. per sq. in. If the passing of the yield point of the reinforcement marks the failure of the slab the maximum load to be expected (based upon the Joint Committee recommendations) should be about 280 lb. per sq. ft. This is only about one-fifth of the load carried by the slab in the November test. The safe live and dead load of 83 lb. per sq. ft. is about one-sixteenth of the load actually carried on panel *H*.

If it be assumed that the reinforcement was stressed in tension to the yield point both at the supports and at the center of the span and that the entire load was carried by flexure of the slab the moment at each of these places would be 0.00865Wl.

Computations based upon the Joint Committee standards give 67 lb. per sq. ft. as the safe live and dead load for panel *J*. The test load of 1,184 lb. per sq. ft. plus the weight of the slab minus the reduction of 8 per cent. referred to on page 329 is seventeen times the safe live and dead load.

For panel *K* the safe live and dead load, computed in a similar manner, is 48 lb. per sq. ft. and the test load of 920 lb. per sq. ft. plus the weight of the slab minus 8 per cent. of the total is more than eighteen times as great.

Taking the weight of the slab as 50 lb. per sq. ft. and the safe loads given in these computations it is found that panel *H* would safely carry only a little more than one course of brick, panel *J* would carry only two-thirds of a course and panel *K* would not be safe under its own weight.

The foregoing comparisons indicate that more liberal rulings might safely be made for the design of slabs of this type even though it may not be feasible to explain analytically the action of the slab under load.

Fire Precautions in a Woodworking Plant

All stair wells and elevator shafts should be enclosed in fireproof towers, and to make fire walls and fireproof towers effective all openings should be fitted with automatic fire doors. Stairs should be of non-combustible material so they cannot be destroyed in case fire is communicated to the stair well itself. All sash should be steel and the windows opposite adjacent buildings, where buildings are 30 ft. apart or less, should be glazed with wire glass. A good sprinkler system should be installed throughout the entire plant with plenty of yard hydrants and a good supply of fire hose. All motor-control switches should be enclosed in steel boxes so arranged that the box cannot be opened when the switch is closed. All switches for motors driving spray-booth fans, or for motors in other locations where inflammable gas or dust is prevalent, should be of the remote control type enclosed in tight steel or iron cases, with a push button near the booth or other machine.

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Steel Forms for Concrete Columns and Floor Slabs

Describing the Application of Metal Forms in the Construction of the Columbia Graphophone Company's New Seven-Story Structure in Baltimore

DURING the decade before the war, steel forms attracted considerable interest in the field of concrete construction. Architects, engineers and contractors, seeking a way to avoid lumber waste and to minimize the amount of labor incidental to the use of wooden forms, gradually came to realize that the solution of their problem lay in the use of such forms. This recognition increased to a still greater extent during the past few years, when construction men found in steel forms a decided relief from the high wages and lumber prices; but today they are more widely used than ever. At the present time, when cost reduction is the watchword of business world, the economy features of steel forms promise to make them standard equipment for all concrete construction.

Steel, for forming or moulding concrete, has many advantages over wood. Forms can be re-used almost indefinitely, with no possibility of warping or wearing and, consequently, without waste. Concrete formed with steel presents a much smoother surface than can be obtained with the use of wood. The forms come to the building site ready for use, thus eliminating the field labor which must necessarily be expended to manufacture wood into forms.

On jobs involving circular construction, the use of these forms has been so successful and is so generally understood, that it has become standard practice. This class of work includes tunnels, culverts, large sewers, etc. It was not until the last two years, however, that the use of steel forms has proved economical and efficient for constructing flat slab concrete floors. A notable example is the Columbia Graphophone Building recently completed in Baltimore, Md., by M. A. Long Company, general contractors.

The Columbia building is a seven-story structure with a floor area of approximately 8,400 sq. ft. per floor or a total of about 670,000 sq. ft., including the roof. Columns are spaced twenty feet on centers and the drop panels at the column heads are eight feet square. The floor slabs are nine inches thick and the round columns vary from forty inches in diameter in the basement to sixteen inches on the top floor. The upper six floors and the roof slab were formed and poured in 73 working days.

FIG. 1. SHOWING EXTENT OF THE OPERATION

The extent of the operation is shown in Fig. 1, which indicates in a general way the sequence of movement in the handling of the forms and placing of concrete.

Form work was started at both ends and moved towards the middle, with the job organization so distributed that when concreting was finished in the middle portion, forms were again ready for concreting at the two ends.

General practice has required the use of from 3.2 to 4.0 B. F. M. lumber per sq. ft. contact area of concrete formed. The method of forming employed in the construction of this building required the use of but 1.35 B. F. M. lumber per sq. ft. contact area of concrete formed and over one-half of this lumber was re-used four days after the concrete was poured. One-half of the lumber then left in place or one-fourth of the total was removed in about ten days and the balance removed in about three weeks.

The system of shoring as employed with the steel forms was such as not to require reshoring; and due to the fact that the steel forms would not permit of seepage of cement to the shoring below and the fact

that practically no nails were required, the lumber used for this purpose was remarkably clean at the completion of the job and had a high salvage value. However, the outstanding feature was the fact that it was necessary to purchase and expend or destroy less than one-fifth of the lumber that would have been destroyed if lumber alone had been used.

The shoring used was of 4″ x 4″ timber placed six feet on centers one way and five feet on centers in the other direction. These timbers were made up on the ground before erection work was started, cut the proper length with due allowance made for wedging at the bottom to take care of inequalities in the levels of the concrete slabs. The shores were fastened together on the floor with a 1″ x 6″ timber and raised in batteries of three. The 1″ x 6″ served as a spacer for the proper centering of the shoring posts and at the same time provided a ledger support at the proper scaffold height, to work on when erecting ledgers for carrying steel panel forms, as well as

FIG. 2. SHOWING METHOD OF ERECTING SUPPORTS

providing a scaffold from which to strip ledgers and steel panels after concrete was poured. After the shoring was erected, the tops were leveled with the use of a transit, one man at the instrument, while another operated the rod which was hooked over the top of the shore. The second man also drove the wedges at the bottom of the shore, bringing the top to the proper elevation. Thus two lines of shores were leveled at one setup of the instrument. The ledgers carried by the shores were of 2″ x 8″'s. These were supported as shown on Figs. 2, 3 and 4. This method of supporting the stringers required the use of no nails, for a 2″ x 4″ slab on each side of the shore pivoted on a bolt when turned up, held the stringers in a vertical position.

The shoring system was then ready to receive the steel panels, these panels being made of No. 14 gauge pressed steel in two standard sizes, 6 ft. long by 2 ft. wide and 6 ft. long by 1 ft. wide, and so designed as to carry the maximum imposed load when supported at the ends. These panels were laid on the stringers without nailing and butted end to end and side to side, the ends of the one foot panels coming directly over

FIG. 3. VIEW UNDER SUPPORTS

the 4″ x 4″ shores, the top of the 4″ x 4″ in direct contact with the underside of the top metal of the one foot steel panel. Next to the 1-ft. panel, two 2-ft. panels were placed and then another 1-ft. panel making the 1-ft. panels, five feet on centers in that direction of the centering of the shores.

The steel panels, after being placed, received a brush coat of light paraffine oil, after which the reinforcing steel was placed, the inserts set and the concrete poured. In connection with the setting of inserts, a small hole was drilled in the desired locations through the steel panels, a small breast drill being used for the purpose with a bit on a shank long enough so that it could be operated from a standing position, a very few turns being necessary to dril through. The inserts were then held in place by the use of a barbed four penny nail driven into the hole. This held the inserts securely and the resultant holes were so small as not to affect the appearance of concrete poured on the panels when re-used.

The system of laying steel panels was so laid out as to leave very few spaces requiring patching and these were taken care of by laying down strips of steel sheets of required width and length.

FIG. 4. VIEW FROM ABOVE

LIBRARY
DETROIT EDISON CO.
JAN 19 1921

All interior columns were round with bell shaped heads. These were formed with steel forms adjustable to height and diameter. The surface of the steel coming in contact with the concrete was coated with light paraffine oil, which not only prevented the concrete from adhering to the forms, but materially affected the resultant finish on the concrete columns, leaving them with a smooth, glazed finish. The same finish was obtained on the ceilings. Fig. 6 illustrates one of the floors after forms were stripped, and gives a fair appearance of the finish obtained without patching or brushing.

After concrete slabs were poured about four days, the supporting 2″ x 8″ stringers were removed by turning down the 2″ x 4″ slabs on the sides of the shores. This operation released the 2″ x 6″ panels, leaving the 1″ x 6″ panels in place supported on the top of the shores only. It will be noted that this operation did not require the pulling of any nails. The 2″ x 8″ stringers were dropped to the bracing ledgers forming a scaffold platform from which the man worked when removing the steel panels. The steel panels when removed, were loaded directly on small trucks provided for the purpose, space between shoring providing aisle ways for operating these trucks. When loaded, the trucks were rolled to the side of the building and picked up with a hoist and

FIG. 5. PLACING THE STEEL PANELS

deposited on the succeeding working floor. This method of operation reduced rehandling to a minimum. The trucks were rolled on rubber-tired wheels and pushed by one man to the new location of panel laying as shown on Fig. 4, the car being moved forward as the panels were laid, and the panels unloaded and laid in the new position in one operation. The laying of these panels was purely a mechanical operation. A gang of seven men laid an average of 12,000 sq. ft. per day.

The concrete columns and ceilings were painted; and it may be interesting to note that, due to the glazed finish obtained by the use of steel forms, it was necessary to use but one-half of the quantity of paint originally estimated.

In the application of the system of forming used on this operation, it was necessary to make some slight changes in the panel layouts and sizes of de-

FIG. 6. APPEARANCE OF THE FLOOR AFTER FORMS WERE STRIPPED

pressed heads as originally shown on the architectural drawings, in order to make the entire floor plan standardized. These changes did not affect the strength of the structure nor did they add any concrete over the original plan. The saving of time and labor by virtue of this standardization was so material as to make the changes only incidental. Such changes can generally be made in adapting almost any flat slab structure to the use of steel forms in construction.

Throughout the entire job, the steel forms proved themselves adaptable to every requirement. Their superiority to wooden forms, from every standpoint, was so emphatic as to leave no room for doubt that the use of wooden forms will soon be a thing of the past and that maximum efficiency and economy in concrete construction are to be had only by means of steel forms.

Emergency Generator Units

In many plants it is often economical and convenient to install a small direct-connected high-speed generating unit to furnish lights at night and operate a few machines without the necessity of operating the main engine. As the exhaust steam from such a unit will generally be all used in the heating system and dry kilns, the power generated is practically a by-product and the only cost for the power generated is the fixed charge incident to the additional investment. Such fixed charges will often be found to be less than the cost of breakdown service from the power company.

Philadelphia's Exhibit

Plans Rapidly Maturing for Architectural Show Starting March 28

The joint exhibition board of the Philadelphia chapter of the American Institute of Architects and the T-Square Club has sent out its preliminary notice to the large list of architects on the special architectural exhibition which will be held in conjunction with the real estate and building exposition of the Philadelphia Real Estate Board, at the First Regiment Armory, during the week of March 28. The joint board of architects consists of George Howe, chairman; R. J. Wadsworth, William C. Stanton, H. Bartol Register, Donald M. Kirkpatrick, Joseph P. Sims and Clarence C. Zantzinger.

In their notice the joint exhibition board said:

"An architectural exhibition is to be held in conjunction with the real estate and building exposition, beginning March 28, 1921. The purpose of the exhibition is educational, and as it marks a new departure, the hearty co-operation of all architects is urged.

"Some forty thousand visitors attended the real estate and building exposition last year, and this year an even larger attendance is anticipated. Acting in accordance with the wishes of the executive committee of the Philadelphia chapter of the American Institute of Architects and of the T-Square Club, the exhibition board is availing itself of the great educational opportunity of presenting before so large a public the best and most representative work done in and about Philadelphia for the last ten or fifteen years, or contemplated in the near future, laying emphasis on civic improvements and domestic architecture, particularly the small house. Such an exhibition cannot fail to have a marked influence on public taste, and all architects are again urged to co-operate by sending their best work, whether previously exhibited or not.

"Exhibits should consist of plans, drawings and models of contemplated or executed work, or of large photographs of completed buildings, and must be suitably mounted or framed. Small photographs, mounted either singly or in groups, will not be hung. Exhibits will be called for and returned by the exhibition board."

The plans of the architects' committee provide for the largest and most varied exhibition which they have ever held.

A notable exhibition of interior decorations is also being arranged by the advisory committee of architects, consisting of Nicola D'Ascenzo, Edward A. Crane, John P. B. Sinkler, Grant M. Simon, D. Knickerbacker Boyd and Emile G. Perrot.

This committee is assembling from hundreds of sources in Philadelphia furniture, draperies, objects of art and other decorations, which, in itself, will comprise an exhibit unique in the art history of Philadelphia. Scores of the most noted antiques in this territory have been promised to the committee by their owners.

Boston Society of Architects Meets

Passes Resolution Upon Striking Mechanics

The Boston Society of Architects at a meeting held February 14, 1921, approved the following statement and passed the following resolution in regard to the present strike of the mechanics in the building trades in Boston:

"At this time employees in the building trades in Boston are on strike for higher wages and a five-day week, at a time when the cost of living is appreciably going down and there is a vital necessity for increased production. No more unfortunate time could have been taken for demanding higher wages. If there was to be any change at all it should have been in the direction of lower wages. Still more unfortunate was the demand for the Saturday holiday. If there is one thing needed in the world today it is work, and no man or woman needs two whole days of rest in seven; on the contrary, they are much better occupied six out of seven days at their normal work. This is particularly true when the normal day is on the reasonable basis of eight hours. The well-being of this Nation depends on the continued application to industry and increased production by all classes. This post-war period calls particularly for special effort on the part of all to make up for the actual, if not apparent, impoverishment of the Nation due to the wastage of war."

Voted:

WHEREAS, the prosperty of this country and of the world is now endangered by the after-effects of the War, and

WHEREAS, each individual man and woman and every group and class of men and women can help to restore pre-war conditions and prosperity by work to the end of increased production, therefore

BE IT RESOLVED, that the Boston Society of Architects makes public its opinion that the present strike of the mechanics of the building industry in Boston has been called at a most unfortunate time, and constitutes an act contrary to the public welfare, because it is based on a demand for shorter hours per week and for wartime wages.

Seattle A. I. A. Elects

The following officers were elected at the annual meeting of the American Institute of Architects (Seattle, Wash., Chapter): President, Charles Allen; first vice-president, David J. Myers; second vice-president, A. J. Russel, Tacoma, Wash.; third

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vice-president, H. C. Whitehouse, Spokane, Wash.; secretary, Harold C. Smith; treasurer, Carl Siebrand and J. S. Cole, member of the board of trustees, all of whom are from Seattle, with the exception of those otherwise designated.

Guests of honor at the meeting included Henry H. Kandall, Boston, Mass.; president of the national organization, and Robert D. Kohn, a director of New York. A delegation from the Oregon Chapter assisted in the social features.

New York State Association Meets

The New York State Association of Architects held its annual meeting in Albany on February 28. Dr. Downing, head of the Professional Examinations Division, State Department of Education, spoke on the architects' registration law and the proposed amendment thereto and on other professional laws. Mr. Cawley, attorney for the Legislative Committee of the Association, talked on legal phases of the profession.

Officers for the year were elected. Leon Stern of Rochester was chosen president.

The members attended a dinner at the Albany Club and visited the Senate and Assembly.

Particular attention was given to the proposed amendments to the registration law now in force in the State. It is proposed to secure "an annual registration upon the payment of two dollars per year and to vest the power of enforcement in the person of the Attorney General." The amendments would also remove the present requirement that architects file their certificates of registration in every county where they may have work.

A letter has been sent by the Association to all members urging them to urge the passage of Bill number 904 in the Assembly and Bill number 637 in the Senate, designed to "Amend the General Business Law, In Relation to Registered Architects. The bill was introduced in the Assembly by Assemblyman Bly of the Judiciary Committee, an architect for Kings County, and has been approved by Assemblyman Martin, Chairman of the Committee. Senator Burlingame introduced it in the Senate.

The bill will probably come up for final consideration in the week of March 14, and all members of the Association, as well as other practising architects interested in it, are urged to do whatever they can to secure its passage.

Architect Wins Prize for Writing Best Play

Boston Man Gets $500 Morosco Prize in Competition at Harvard

The annual competition at Harvard for the Morosco prize, offered by Oliver Morosco, theatrical producer, for the best play written by a past or present member of "English 47," Prof. George P. Baker's course in play writing at Harvard and Radcliffe, has been won by Thomas P. Robinson, a practicing architect, of Boston.

The play, which wins the $500 prize and will shortly be produced by Mr. Morosco, according to the terms of the contest, is entitled "The Copy."

Mr. Robinson, its author, is a member of the architectural firm of Derby & Robinson. He took the course of Harvard in 1912-13, and during the past few years has been intimately associated with the "47 Workshop," the dramatic laboratory at Harvard, acting as artistic adviser. He and Henry Hunt Clark of the Boston Art Museum have supervised the setting and design of plays produced by the Workshop. The judges were Prof. George P. Baker, Mr. Morosco, and Walter Prichard Eaton, the dramatic critic and author.

It is said that in all probability at least two other plays submitted in the competition will be accepted for production.

Marriage Profitable in Berlin

New Couples Secure Housing Preference

The shortage of houses and the high cost of living are no longer considered serious obstacles by the youth of Vienna and Berlin who are contemplating matrimonial ventures. A newly acquired bride is a valuable asset, as all persons recently married have been placed on the preferred list in the Government housing bureau. Moreover, one investigator says two can live in one house cheaper than one in a hotel, so that marriage has become a sound business proposition, especially if the prospective wife has a profession and can contribute to the family income. In keeping with the idea of making the undertaking a paying proposition, expensive honeymoons are now out of the question. There were 1,300 marriages in Vienna on Sunday of last week, which was the height of the carnival season, and 53,000 in Berlin during the last year, which breaks all records in the two cities.

Chicago Notes of Interest

Chicagoans count that day lost whose low descending sun sees no new plans for the preservation of the old Field museum building in Jackson Park. The Illinois Chapter of the American Institute of Architects is now planning to make it an art and recreation center and to this end an effort is being made to raise $1,640,000, the sum necessary to place the building in repair.

Architects of Chicago and Illinois, members of various architectural organizations will co-operate in

the thirty-fourth annual exhibition of architecture to be held at the Chicago Art Institute from March 8 to April 5. Organizations co-operating in the exhibition will be the Illinois chapter of the American Institute of Architects, the Illinois Society of Architects, the Chicago Architectural Club and others. John A. Holabird is chairman of the exhibition committee.

Cambridge Architect Wins

City Planning Commission of Cleveland Awards $500 to Philip W. Foster for Suggested Use of an Abandoned Cemetery

The City Planning Commission of Cleveland, Ohio, has just announced the award of a cash prize of $500 for the best suggested use of an abandoned cemetery in the downtown section of Cleveland, to Philip W. Foster, landscape architect in Cambridge, associate of John Nolen, city planner. The plan of Frank J. Mulvihill, of the same office, received honorable mention. There were 206 competitors.

The features of the winning design are the extension of Carnegie avenue along Summer avenue cutting through the cemetery to meet Eagle avenue at East Ninth street so that the greatest economy in use of land is effected; the location of a tall shaft at the intersection of the axis of Carnegie and Eagle avenues if extended into the property; and the development of the rest of the cemetery into a breathing space or "in-town" park. There is provision for a children's playground in one section.

Whale Bones for Buildings

Huge Ribs Make Support for Bungalow in Cataline Islands

The scarcity of building material is not worrying Avalon, Cal., residents. For twenty years several huge whale ribs have been bleaching in the sun in front of the Avalon Tuna Club. An enterprising contractor sought the owner of the historic bones. He didn't want them for a museum, but they would make the supports for a "whale of a bungalette," he explained.

Canvass, wallboard and flooring have been added to the bones and the popular little Catalina island city has acquired a new shelter for its many visitors.

White House Again to Become Mecca Under the Hardings

In an effort again to make the White House and grounds one of America's show places, to which pilgrimages may be made by people from all parts of the country, plans are being made, under the supervision of Col. Clarence Ridley, superintendent of buildings and grounds, to beautify the property by the addition of thousands of flowers and expansive shrubs.

The White House grounds were closed to the public with the entrance of the United States into the war, and since the signing of the armistice two years ago President Wilson, desiring to continue his seclusion from the public, has maintained the ban against visitors.

Under the Harding administration it is expected that the White House grounds will be more accessible to the public and that no protests will be made against visitors being conducted through the historic rooms of the executive mansion.

America's Gift to the World

Will It Be of an Artistic or Ethical Nature, Asks St. John Ervine

It may be, as Meredith Nicholson has suggested, that America's gift to the world will not be an artistic gift at all, but an ethical one.

Each country seems, like each person, to have some peculiar gift to give to humanity. England gives poetry to the world—there has never been in any other country such a procession of poets as have passed through England in the last six hundred years—and Germany gives great music to it. What is the gift that America will give? I am interested in Meredith Nicholson's opinion that the gift may be a higher standard of justice, a greater range of freedom, though contemporary life in the United States hardly convinces me that his opinion is sound.

In any event, America must produce a literature of her own. If her gift to the world is to be a nobler ethics than the world now possesses, then she cannot fail also to give the world a noble literature. All great writing is fundamentally the expression of a powerful individuality. One expects to find the greatest literature in that country where individuality has the freest play. Is that country America?

Treasures of Loreto Are Reduced to Ashes

Relics of Holy Family Burned

Pope Benedict has received a report from Mgr. Andreoli, Archbishop of Loreto, showing the losses of irreplaceable religious treasures in the fire in the Chisea della Cassa Santo in Loreto to have been more calamitous than at first reported. The loss through the burning of the church which sheltered the world-famous shrine, according to Catholic tradition the early home of Christ in Nazareth, is estimated at more than 12,000,000 gold lire.

The shrine, which was decorated with arabesques in gilded brass, and the priceless statue of the Virgin were reduced to ashes. No trace of the precious

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cedar wood of which the statue was made was left.

Other artistic and religious treasures destroyed included the altar, decorated with semi-precious stones, and a sacred dish, supposed to have belonged to the Holy Family, which was lined with gold worked by Benvenuto Cellini. Two silver busts representing St. Anne and St. Joseph, the silver bells on both sides of the statue of the Virgin, and all the votive lamps of gold and silver were completely melted.

Profound sorrow is felt by the peasants living in the Loreto district as a result of the loss of the famous Madonna and her altar.

Illinois Chapter Architects Hold Meeting

Interesting Subjects at Monthly Meeting of Illinois Chapter of American Institute of Architects

A very full and interesting program was presented to the members of the American Institute of Architects, Illinois Chapter, during its recent meeting at the Art Institute. Following the dinner, Mr. Henry K. Holsman, president of the chapter and the presiding officer, presented several gentlemen who have been nominated by the various architectural journals to judge the best plans in the small house competition.

Among those appointed was Mr. E. J. Russell, of St. Louis Chapter, of the American Institute of Architects, who spoke briefly concerning the National Board of Jurisdictional Awards. Mr. Russell predicted a stirring session of the Board in March. The cause of the storm, he said, would be the President of the International Brotherhood of Carpenters, who will stand pat for the unions.

Mr. H. W. Hewitt, of the Minneapolis chapter, of the American Institute of Architects, stated that very few architects can afford to handle small house plans of five or six rooms. He said the Minnesota Small House Bureau has designed about one hundred different houses from four to six rooms. The Bureau favors using as much standardized material, such as form lumber, etc., as possible. Mr. Hewitt is also on the board of judges.

Mr. Dwight H. Baum, of the New York Chapter, of the American Institute of Architects, another member of the board of judges, sketched briefly the exhibit New York will have on March 26, for which about $30,000 has been appropriated to date to cover expenses.

Mr. Hal. H. Hense, from the Atlanta (Ga.) Chapter, of the American Institute of Architects, was introduced by Mr. Holsman, who asked him to tell the architects "how you all do it down there."

Mr. Robert H. Sexton, who is manager of the "Own Your Home" exhibition in Chicago, to be held on March 26 to April 2, said: "To build better homes—that is what the exposition stands for."

Mr. Henry G. Zander, of Koester & Zander, Chicago, spoke short and to the point. He commended the action of the Institute in endorsing the Calder bill providing for a federal bureau devoted to the construction industry in Washington. Mr. Zander declared that the bankers of Chicago believe that an adequate fund will be available for home building as soon as building costs are stabilized. The speaker said a loan of $5,000 may be secured at the present time and that the larger operations will be financed in the future. Mr. Zander cited a case wherein $3,000,000 was to be loaned on a large building project at six per cent., but was offered at seven per cent. He warned the assembled architects that the individual municipalities would float bond issues in all parts of the country to finance housing, thus coming in competition with the mortgage loan bankers and others, if money could not be secured through the banks.

Professor James H. Breasted, of the University of Chicago, was the lecturer of the evening, his subject being, "Architectural Origin in the Ancient Orient." With the use of slides he showed how the pyramids of the ancient Pharaohs, constructed about 3,000 B. C., are the architect's heritage, being the first examples of stone masonry.

Mr. John Holabird, of the firm of Holabird and Roche, gave a brief illustrated description of the new Stadium on Chicago's lake front.

Personals

John P. Kingston & Son, architects and engineers, who were located at 518 Main street, Worcester, Mass., and later had temporary offices at 58 Front street, that city, are now in a permanent location at 507 Main street.

O. C. S. Tiroli, architect, recently opened an office at 211 State street, Bridgeport, Conn., and desires catalogs. He was formerly practicing in Worcester, Mass.

Stanley Matthews, architect, has opened an office at 75 Blymyer Bldg., Cincinnati, O.

J. E. Fieldstein, architect, formerly located at 1328 Chestnut street, Philadelphia, Pa., is now practicing at the Northwest corner Ninth and Walnut streets, that city.

George Henry Dieringer, architect and structural engineer, Wheeling, W. Va., announces that he is desirous of circulars, catalogs and prices of both bank and hospital equipment and building materials usually used in work for bank and hospital purposes.

Weekly Review of the Construction Field

With Reports of Special Correspondents in Regional Centers

"Including a Drop in Rents"

For the first time in recent history, at least, a prominent business man not directly associated with housing in any of its many phases has had something to say about rents.

The man was S. M. Felton, President of the Great Western Railroad, and this is what he said:

"The release of railroad funds by the government should act as a general tonic for business. The opinion of the leaders at the executives' (railroad) conference was that it was absolutely impossible to reduce rates soon unless wages are also cut down."

We had heard that said before, and were preparing to discard Mr. Felton's remarks, when, lo and behold, we read the following:

"There will be no business resumption in general until the readjustment is over, including a drop in rents."

For once in its life the rent problem has actually been recognized by a railroad executive, and has been spoken of almost in the same breath with a reduction in wages!

An Old Idea and a Good One

Why Not Utilize the Millions Deposited in the Postal Savings System as a Source of Building Capital?

This scheme has been proposed before, but a good thing will bear repeating.

The money mon deposited in the Postal Savings System bears simple interest at the rate of 2 per cent. That money could be loaned out to private loaning institutions at 4 per cent., and they in turn could lend it at the customary 6 per cent.

The 2 per cent. profit for the Postal Savings System would cover a substantial portion of any added clerical expense to the Government. It has been frequently shown by experts that very little added clerical expense would be involved. The loaning institutions would thus be able to get money cheaply, make a profit on it, and be assured of a supply of money from a solid source.

Add to this a change in the law so that $5,000 and not $2,500 would limit the individual deposit, and millions more would be made available for building purposes.

It may be argued that the private loaning institutions have plenty of money at hand, and will be able to take care of the financial side of building when Spring arrives; but it is not bad economics to assure private institutions an added supply of money, thus giving credit both flexibility and a somewhat fuller measure of stability.

Tax exempt mortgages up to $40,000, under national and not local law, coupled with the scheme sketched above, appears to be a sound and constructive piece of proposed legislation.

How Much Have They Increased?

Just what have been the per cent. increases in labor and materials in the building industry during the period 1914-1920?

Gerhardt F. Meyne, a prominent Chicago contractor, gave the following figures at the conference recently called by the National Lumber Manufacturers' Association in Chicago:

Trade	Increase per cent. from 1914 to 1920
Carpenters	92
Bricklayers	67
Laborers	150
Cement finishers	92
Caisson diggers	117
Hoisting engineers	67
Structural ironworkers	84
Plasterers	67
Material	
Structural steel	206
Common brick	129
Crushed stone	157
Screenings	240
Bank sand	240
Torpedo sand	157
Portland cement	276
Lime	131
Common nails	170
Scaffold plank	129

Mr. Meyne, comparing 1914 and 1920, finds that the grand percentage of increase for labor over 1914 is 92, and for materials, 184.

That European Situation

An architect recently asked the writer if he did not consider this journal's reference to the European situation in these columns a trifle far-fetched in its application to the immediate problems of the United States. He added that he realized fully that Europe's stability would naturally be a factor in our industrial situation, but that he considered any stressed reference to it just a trifle far-fetched.

The best answer to his remarks is found in a statement recently made by Francis H. Sisson, vice-presi-

dent of the Guaranty Trust Company of New York, one of America's ablest bankers, and an official of what may be termed one of the ten most important banking institutions of the world.

Mr. Sisson said this:

"Not the least important factor which helps to gauge the money market, and financial and industrial conditions in general, is the distressing situations found in various European countries. When, for instance, the question of German reparations is settled to the satisfaction of all concerned, foreign production and manufacturing are resumed in more normal quantities, and peace is made certain once more, we will find the financial picture greatly changed for the better. All these things have a bearing upon the adjusting of prices, money rates and so forth in this country."

Gilmore—Chicago

(*Special Correspondence to* THE AMERICAN ARCHITECT)

CHICAGO—It all depends upon the optimism or the pessimism of the individual as to the viewpoint he now takes of the building situation in Chicago. There are straws at which both may grasp to maintain their respective attitudes. In fact, it is pretty well a toss-up as to which would have the better of the argument if the whole situation could be summed up according to the rules of debate and discussed from the premise: "Resolved that the building situation in Chicago is shortly to improve."

It may be interesting to set down a few of the points, both for and against the proposition of building and in order to save the best for the last, some of the pessimistic things shall have the first recital. Here they are in the order of their importance: Building costs not yet deflated. Labor still too high for profitable building. Money very scarce and obtainable only at ruinous rates. General business and industrial uncertainty. A dark and dire conspiracy between real estate men and apartment owners to keep up rents.

Some of these objections to the possibility of early improvement have some basis in fact. Others, of course, such as the last named, are without foundation though all of them are being quoted in the discussions upon Chicago's principal topic of conversation—the building shortage.

Perhaps, the most essential obstacles in the list above are the items of building materials, labor costs and financial stringency. The feeling is somewhat general that building materials have not yet been fully deflated. This objection applies particularly to the building materials, other than lumber, although there have been repeated protestations from material manufacturers that the process of liquidation has been fully realized.

The labor cost is undoubtedly having its weight in the building tie-up, but the optimist can here point to a turn of the tide in his favor for that very question is now up and with fairly good chances for some revision in the wage schedules in the building trades.

As far as the financial stringency is concerned, it undoubtedly exists, though bankers are now inclined to look with greater favor upon loans for building requirements. The other items raised by the pessimists in the building complex are more or less without foundation.

On the happy other hand there are great many things to encourage the belief that building is apt to show early signs of revival. Among these optimistic indications are such things as a considerable improvement in the building permit reports, greater activity in suburban real estate, heavy inquiry as to building costs and most of all an endless agitation against high rates and a consequent discussion of the desirability of home building.

March is continuing the good record shown in February in the matter of building permits. It now looks as if the March totals would run well ahead of last March. The activity continues to be in homes and in apartment buildings and much of the homebuilding in the Chicago suburbs are not included in the city permits.

Activity is being constantly reported in the better suburbs around Chicago. Glen Ellyn reports twenty new bungalows in course of construction and now Wilmette, a northern suburb of miportance, is also having its small neighborhood building boom. Other suburbs are already following suit in somewhat lesser volume.

Inquiry as to the feasibility of home-building is being made on every hand. Architects are figuring on countless residential jobs and contractors report much inquiry of this kind. The Own Your Home Exposition which is scheduled for the closing days of March and the opening days of April will unquestionably augment the volume of home-building enthusiasts and some tangible swelling of the building volume can reasonably be expected.

Repeated strife between flat-dwellers and landlords is keeping the subject constantly before the public mind and no one is being permitted to forget that there is an acute shortage of homes in Chicago and that something must be done about it.

An even more bullish factor in the situation is the knowledge that a great many important projects, including two $3,000,000 bank buildings in the Loop district, are hanging fire merely awaiting a clarification of the general situation and settling of labor and construction costs.

A definite step toward lower building labor has been taken this week in a formal demand on the part of the Associated Builders on the carpenter's union for a lower wage scale. The proposal is to clip 25

cents an hour from the pay of carpenters and 30 cents an hour from the envelope of the ordinary laborer in the building trades. This would bring the scale down to $1.00 and 70 cents per hour respectively. The union leaders have refused to concede anything, but in view of the fact that some 45,000 carpenters are idle or have gone into other lines at lower wages, gives the union men a rather bad advantage in discussing the situation.

Another interesting thing that will doubtless have its effect on construction costs is the announcement from the Illinois road building officials that all bids for highway construction in Illinois have been rejected on account of extreme quotations. This action is already having a bearish sag on those materials which enter into the construction of both buildings and highways, such as concrete, sand, brick, lime and the like and a consequent weakening in the materials list is not unexpected by those conversant with the economic trend of things.

If costs of construction will only adjust themselves slightly there is a great deal of important building to be done immediately within the Loop district.

One of the first big items of construction to go ahead will be the Illinois Merchants Trust Company bank building which is to face the new Federal Reserve Bank now under construction in La Salle street at Jackson Boulevard. This building will not be constructed on the cost plus basis and while the money for the construction is ready and waiting lower construction costs—notably labor costs—will have to be adjusted before the word is given to begin operations.

The State Bank of Chicago is another strong financial institution which is ready to erect, a legal-height-limit bank and office building at La Salle and Monroe streets, but which is being held back by the feeling that prices have not yet touched bottom. Both of these banks have four years under their leases and will not proceed hurriedly in the construction work.

Another large building now being discussed is a million dollar labor temple to be located at Ashland Boulevard and Adams street. The building is to be the home of the Amalgamated Clothing Workers of America, an organization having a Chicago membership of 42,000.

As far as the prices of lumber and other building materials are concerned there is very little movement. Lacking more than a nominal demand at present, prices are doing well to hold at old levels. Present quotations in the Chicago market are:

Yellow Pine: B. & B. 1-in., $95 to $130, depending on thickness; 2 x 4, No. 1, 10 to 16 ft. length, $51 to $53; 2 x 6, $48; 2 x 8, $50; 2 x 10, $53; 2 x 12, $55; 13-16 x 3¼ z & b flat flooring, $85 to $90; 1 x 6, No. 2 common, $48 to $90. *Douglas Fir:* 2 4 S, in sizes up to 12 x 12, in length up to 32 ft., $65 to $70; 14 x 14, $68 to $73; 16 x 16, $72 to $75; 18 x 18, $75 to $80. *Hard Maple:* Four, ¼ No. 1 and 2, $135; select, $120; No. 1 common, $100; No. 2 common, $65; No. 3 common, $32. *Birch:* Four ¼ No. 1 and 2, $160; select, $133 to $138; No. 1 common, $95 to $100; No. 2 common, $60 to $65; No. 3 common, $40. *Red Gum:* Four ¼ No. 1 and 2, $150; No. 1 common, $90 to $92; No. 2 common, $45.

Face Brick—Standard, vitrified red, $32.00@34.00; Smooth, Indiana red, $38.00@40; Smooth, Ohio red, $38.00@40.00; Smooth, Pennsylvania red, $46.00@48.00; Smooth, buff, $45.00@47.00; Smooth, gray, $47.00@49.00; Rough, buff, $44.00@46.00; Rough, gray, $47.00@49.00; Variegated, rough texture, $34.00@49.00.

Common brick, $13.00 to $16.00 per M. Portland cement, $2.25 per bbl. Torpedo—Lake and bank sand, $3.50 per yd. Crushed stone, gravel screenings, $3.50 per yd. Hydrated lime, Ohio, paper, $21.00 per ton. Hydrated lime, Ohio, cloth, $29.00 per ton. (Includes sacks at 30c each). Hydrated lime, Wis. paper, $19.00 per ton. Bulk lime, $1.65 per ton.

(*Special Correspondence to* THE AMERICAN ARCHITECT)

SEATTLE—The jobbing trade of the Pacific coast is now comfortably equipped to handle any reasonable spring building demand for sheet metals, pipe, cement and roofing through augmentation of stocks during the past week. The fir lumber market is steady. Sheets are fluctuating because of offers of stock by outside mills that was rolled a year ago at lower prices. Jobbers express the opinion that the market on sheet metals, however, is inclined to be statistically sound.

Independent mills have offered this week a lot of galvanized sheets at $5.20 base. Very little black stock is available. Black sheets rolled last year are being quoted to Pacific coast jobbers at $3.75 and blue annealed sheets at 3 cents base. Under these conditions the corporation price is over that now being issued by the independents. The Corporation is reluctant to permit cancellations of delayed orders, some of which are now six months to a year old. No more sheets will come by water, and jobbers have issued strict orders against any more loadings to move intercoastal on account of the expense of reconditioning, which must be done by hand, thereby wiping out the parity under the rail rate.

Stocks of galvanized pipe are about normal. Inventories of 1920 show that stocks of pipe and sheets, with the exception of a few sizes, were larger here on January 1, 1921, than for any similar date in three years. Price reductions in pipe that have been in vogue fractionally for the past ten days have now ceased and buying from eastern mills has ceased abruptly. Efforts are being made to cancel some or-

ders, but it is doubtful whether the mills will permit it. Cancellations have been requested by coast jobbers in pipe fittings and valves on orders that have been accumulating for two years back.

The fir lumber market has held steady, with reduction in the volume of attacks on common dimension, which seemed to buyers to be the weakest spot in the building assortments. Average prices at which fir lumber sold at the mills for the week were $11.50 for common dimension, $49 for vertical grain flooring and $20 for slash grain, $46 for finish, which leads in strength all the building sizes, $19 to $25 for five-eighths by four and $18 to $26 for one by four ceiling, $23 for drop siding, $12.50 for boards and shiplap, $16.50 for plank and small timbers and $21 for big timbers. Shingles are steady, with mill capacity at 40 per cent. The fir log market is weak, but there is little cutting.

The future of the fir lumber industry pivots on rates both by rail and water. The lumber shippers will make an effort before the intercoastal ship conference at San Francisco to induce a cut from $20 per 1,000 feet to New York on the grounds that the eastern lumber demand will not respond to present rail rates and that round $15 will meet the emergency by water. The railways have assented to only partial relief. Lumbermen are trying to make the land carriers see that they are only delaying construction over the United States by holding rates high.

Contractors of the Pacific Northwest, advocating a 20 per cent. reduction in wages for the building trades craftsmen this year at the annual convention of the Northwest Master Builders' Association at Spokane, Wash., this week ruled out the minority that was satisfied to demand a 12½ per cent. cut. This organization lost its identity when contractors of Spokane, Portland, Idaho and Montana voted to join the Associated General Contractors of the Northwest. Contractors of Seattle, Tacoma and Yakima, Wash., refused to affiliate with the national body and voted to form a state organization of master builders.

Resolutions demanded of state officials reasons why payment on estimates on state construction is held back for as long as seven months. The demand is to be made and investigation conducted by the American Society of Associated Engineers. A. J. Welton of Portland, Ore., was made chairman of the committee.

Work of demolishing the four-story Boston block in Seattle has been begun as a preliminary to the construction of the new home of the National City Bank, the second of three of the city's strongest financial institutions to build modern new homes. The new bank building is to be fireproof, marble faced and particularly designed as a banking building. It will be three stories in height with basement and mezzanine, and dimensions of 120 by 108. The exterior will be a light pink gray marble, with flat marble pilasters between large windows. There are to be no columns in the public lobby.

Increase in Steel Production

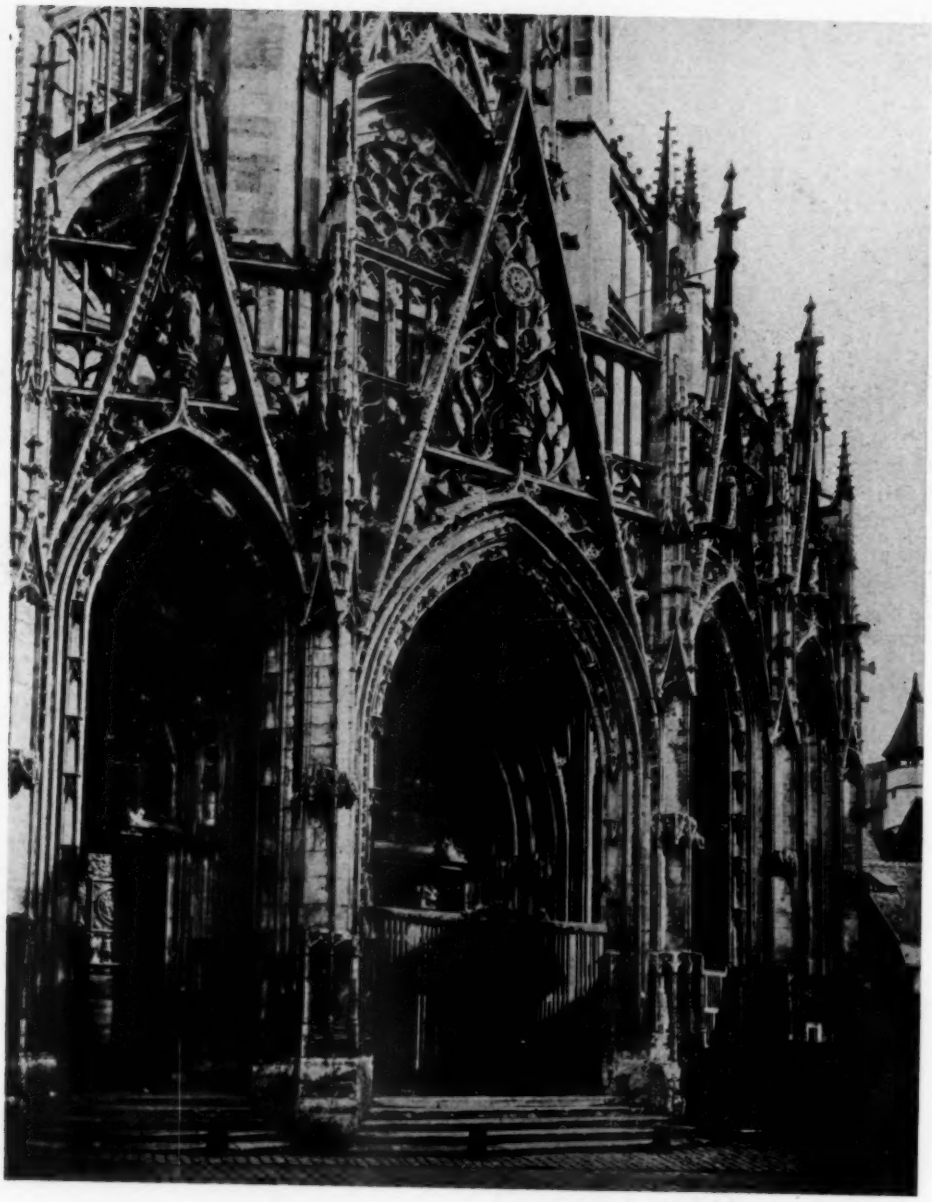
THE steel market of the future will not depend upon what is done now in prices. The uppermost question of the moment is costs. Transportation charges and mill labor costs are the largest of these.

Opinion varies as to the duration of the slowness. Some expect nearly full operations by spring. Others do not look for it until late in summer. Eight of the largest independent plants of Pittsburgh have increased operations, as well as many small ones.

A small increase is noted in the amount of business done in finished lines. Prices of sheet are cut by some of the independent makers about $1 a ton. Automobile concerns, the Standard Oil Company and other demand is calling for an increase in production. The America Sheet and Tin Plate Company's new business is somewhat below normal of the last few years at this time, but new orders steadily are gaining. The American Steel and Wire Company is maintaining a high rate at its plants in the Pittsburgh district, but is stocking a large part of its current production.

For structural shapes and plates, conditions have changed little. All makers of plates are asking the $2.65 price, but persistent reports are heard of $2.50 and less. The Navy Department has bids on some 3,000 tons, which are expected to uncover the real competitive price. In fabricated steel there is apparently an increase in plans for building, encouraged by nation-wide increase in rents.

Elmira, N. Y., was in the market for 200 tons of steel arches for re-inforced concrete bridge; the Massachusetts Park Commission is getting bids on 500 tons of steel for a bridge over the Neponsit river, and the Reynolds Building Trust of Boston is asking estimates on a building requiring 300 tons of steel. The League Island Navy Yard wants 3,000 tons of boat shapes.



DETAIL, CHURCH OF ST. MACLOU, ROUEN, FRANCE